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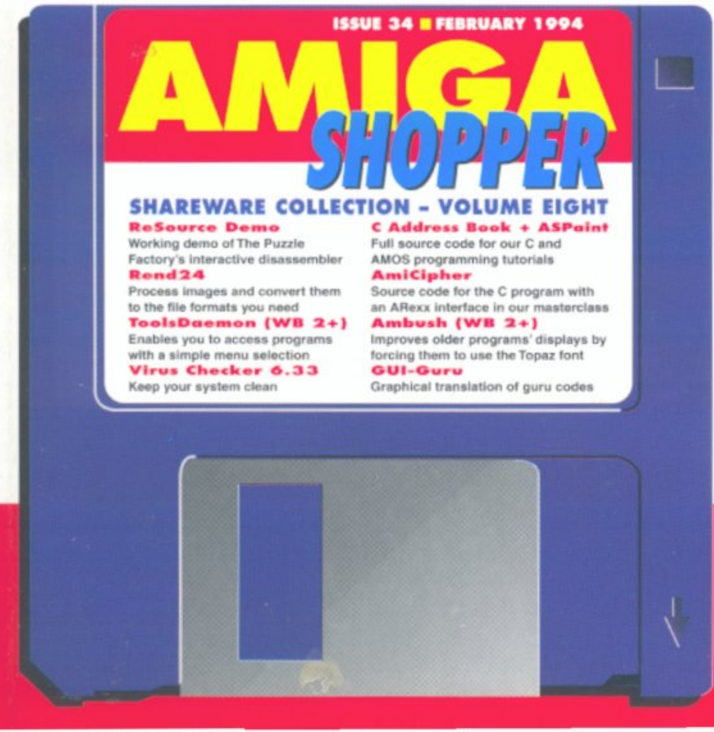
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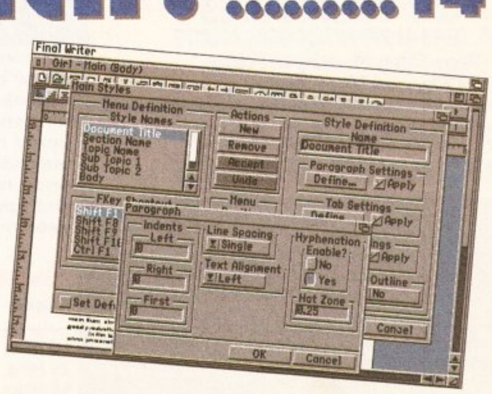
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AMIGA SHOPPER
ISSUE 34 • FEBRUARY 1994

IN THIS ISSUE





Hi,
Some of you have no doubt heard my **Radio 1** announcement that I'm off to the good old **USA** at the end of January 1994. After months of negotiations with my Bosses at the BBC I've landed the job of a lifetime as Radio 1's official West Coast correspondent. I'll be reporting live and Direct from Los Angeles and San Francisco with the odd Trip to New York thrown in for good measure. And so although I'll be living most of the year stateside I'm still going to be very much part of the Radio 1 network, and best of all I'm definately going to keep you Indi customers updated with all the latest computer news as well as the up to the minute games releases in L.A. and the UK.
So as soon as I've finished working on my suntan I'll be busy on the keyboard, reporting to everyone at Indi as usual.
Keep watching this space.
Best wishes
J.B

Jakki Brambles

STOP PRESS !!!
Commodore have today announced that the best selling Amiga CD32 will now have a further two great games bundled with it making 4 in total (5* if you buy from Indi)
Wing Commander - *You are a Starfighter, the best of the best, but nothing in your training prepared you for this. "This is space combat the way it should look". Amiga Power*
Dangerous Streets- *The greatest fighters on earth are ready to do battle with bruising agility that will blow your mind. Take on 8 mighty challengers ready to do battle.*
*whilst stock last

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If you are considering a console w compromise. The new Amiga CD leading edge technology, it's faster with more colours and has superi graphics to any other console on market. As if that's not enough it's also cheaper and with the promise full motion video next year it's too hot product **ONLY £289.99 with 5 great titles**

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We found the perfect printer in the and KX - P2123 quiet printer.
We then considered that if you were going to buy a Panasonic printer you would probably need a quality word processing package to use with it. We found that too, with 'Wordworth' yet at a retail price of £129.99 we thought that might be a little too expensive on top of your printer purchase! So together with Panasonic we decided to give a copy of 'Wordworth' free with every Panasonic printer. Of course your might be the fortunate owner of a Desktop Dynamite Pack or maybe the idea of word processing isn't for you. Once again Indi have the solution with the alternative of two great games. How's that for added value?

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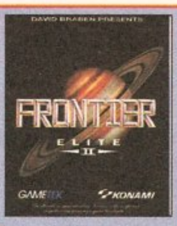
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New Hot Title, indicated delivery 20 December

Panasonic LASER PRINTER

KX - P4410 LASER PRINTER





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KX - P4430 LASER PRINTER



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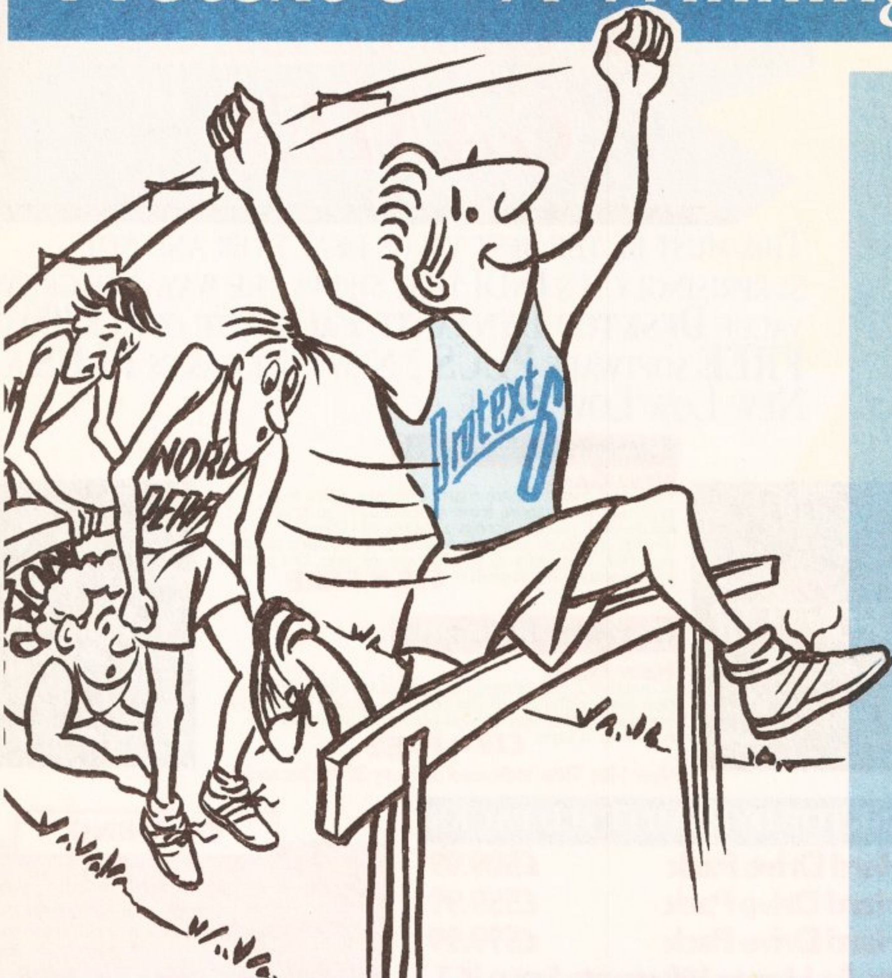
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- New WB menus, requesters, gadgets
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Some highlights of Protext 6

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Styles let you make flexible use of printer fonts and effects. You can change a font throughout a document with a single operation.

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An easy to use dialogue lets you lay out your page precisely as you want using inches or cm for the page length, margins and tabs.

Graphics

Graphic images may be imported into a Protext document. Supports IMG, PCX, GIF and IFF. You can select any resolution and scale the image. Dot matrix, inkjet and laser printers.

Printers

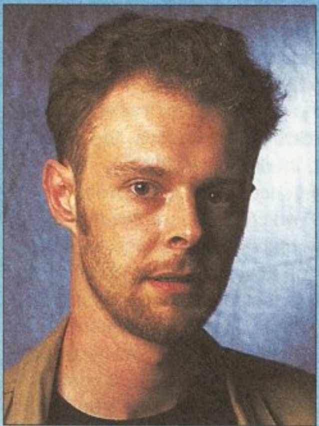
Protext's unrivalled understanding of printers gives you the highest quality printing at the highest possible speed. Using a printer's built in fonts enables Protext to print pages in seconds rather than the minutes taken by some programs.

The list price of Protext 6 is £152.75 but you can order direct today for just £99 inclusive. For any Amiga with 1Mb memory and WB 2.0 or later. Phone us today and we will send you a usable demo version and a full specification, absolutely free. Upgrade offers available - please call us for the current price.

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COMMENT



The editor, Cliff Ramshaw, offers his penny's worth...

This month we're taking a look at the serious software scene on the Amiga. Let's face it, the Amiga to date has been unable to compete with the Mac or PC when it comes to high quality business software. Would it be a wild stab in the dark for me to suggest that this might be one of the reasons the machine itself has failed to sell into the corporate market?

We'll, we've asked some of the top developers about their plans for our favourite machine. We also asked David Pleasance to give us his opinions on the situation, and learned some interesting facts about the next range of Amigas.

And is if that wasn't enough, we've reviewed SoftWood's *Final Writer* word processor and taken a sneak preview of Digita's *Wordworth 3*. These packages prove that software for the Amiga can be every bit as good as that for its rivals.

Anyway, enjoy the issue, and have a happy new year.

COCK-UP WITH DICE

There was a small omission from last month's instructions on how to install DICE, the C compiler provided on the cover disk.

Before you can follow the instructions given in the free booklet, you will first need to install **arp.library** on to your boot disk. You can do this with a simple Shell command:

```
copy AS_VOL_VII:libs/arp.library libs:
```

If there isn't enough room on your Workbench disk for this, first delete something you don't need.

Philips rock the Video CD boat

Commodore's full motion video unit is two weeks away from completion, and should be on sale by the time you read this for the price of £199.99. But a surprise move from Philips looks likely to upset Commodore's plans.

The FMV module is designed to plug into the back of the CD^{32} console. Once fitted, it will play back films and music videos on a standard television set.

Commodore are not the only manufacturer involved in developing an FMV module. They got together with a number of other major players in the home entertainment field, including Philips, Sony, Apple and JVC, to decide on a standard format for the discs that their machines would accept. This standard, MPEG1 (standing for "Motion Pictures Expert Group"), was formalised in a paper called the White Book, to which all of the manufacturers were signatories.

Units have since been designed and built according to the White Book specifications. One example is Commodore's add-on for the CD^{32}.

Philips have been working on their own module for their CD-i system. The first batch of these to be released is expected to break away from the agreed White Book standard, and a deal between themselves and Paramount means that the first 50 Paramount titles to be released, including such favourite films as *Top Gun*, will only work with the Philips system.



CD32 might be top gun in the console stakes, but it seems unlikely that you'll be watching Top Gun with it.

With this manoeuvre Philips clearly hope to gain an early lead in what is expected to become a very lucrative market, and seemingly Commodore, the manufacturer closest to releasing a working FMV module, can do nothing to prevent them. It is generally acknowledged within the industry, though, that after the initial rush of titles Philips and Paramount will be returning to the original White Book standard.

Once the hardware has become established, and once there is plenty of software compatible with all platforms, Video CD looks set to take off in a big way.

With a screen resolution of 342 x 268 pixels, using a 16.7 million colour palette, the quality offered is claimed to be better than that obtained with VHS videotape. Films will become widely available on the new CD format, and be much more durable than their tape-based counterparts.

With the current standard, a maximum of 74 minutes of footage can be stored on one disc, meaning most films will require two. One disc will be ideal, though, for storing digital music alongside videos, and this is expected to be a big growth area in the coming years. Let's hope Commodore grows with it.

Micro-PACE UK to close

Micro-PACE UK, distributors of serious Amiga products, are set to close down. Currently only one person remains manning the office.

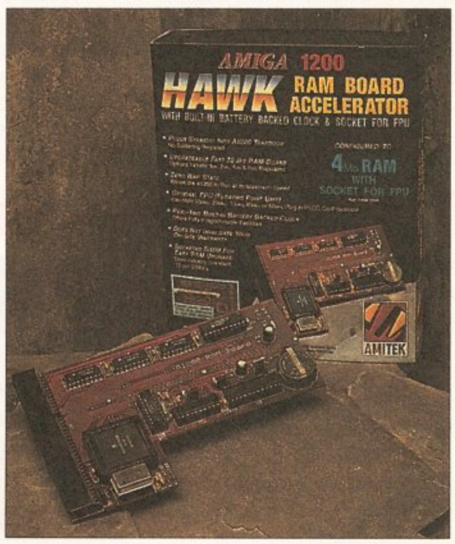
The closure comes as a result of the company's investors deciding against a further cash injection which had been scheduled for earlier this year. It follows the closure back in May of HB Marketing, another distributor dealing with specialist Amiga products.

The situation for Amiga users is not as bad as it may seem. We spoke to Bob Wolter, head of Micro-PACE Computers Inc. in America, who told us: "The US company had sold into the UK and Europe prior to Micro-PACE UK opening, and we will be going back to doing so." He also pointed out that Micro-PACE UK and Micro-PACE Computers Inc. are two separate companies.

AMITEK HAWK HAS ITS FEATHERS SMOOTHED

The Amitek Hawk expansion board for the Amiga 1200 has been re-packaged with a better manual and more attractive box in an effort to increase its sales.

The board will carry either 1, 2, 4 or 8Mb of zero-wait-state expansion memory, and comes with a battery-backed real-time clock as standard. Space is also provided for a 68882 Floating Point Unit (maths co-processor) to further increase the speed of your machine. This can be clocked at 20, 33 or 40MHz. The board's new manual is intended to make fitting easy even for novices. Prices start at £99 for a Hawk with 1Mb of RAM. Call Silica ☎ 081 309 1111 for further details.



Amitek's Hawk RAM board for the Amiga 1200 has received a facelift and been given a better manual. Perhaps now you'll buy it.

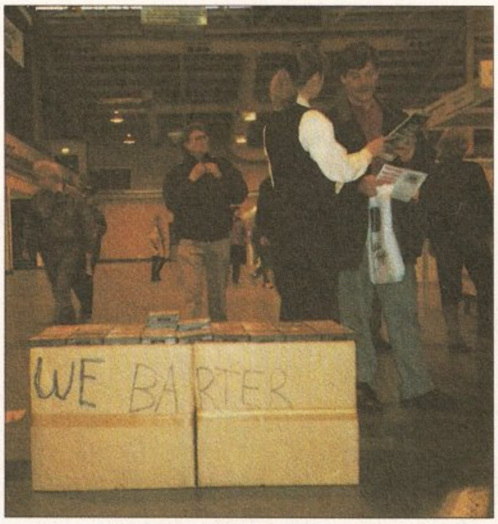
Tempers flare at show

Poor attendance at the recent International Computer Show (Wembley Exhibition Centre, Nov 19-21) kindled ugly scenes between a group of exhibitors and the organisers after the show had closed on the Saturday. Voices were raised and accusations of incompetence were made.

Official attendance figures are not available but staff on the doors estimated that only about 400 visitors turned up on the Friday and about twice that on the Saturday. Mid-day Saturday a petition was organised and signed by about 50 exhibitors, alleging poor promotion and demanding financial compensation. The refusal of Westminster Exhibitions to acknowledge this petition was what led to the after-show confrontation.

On Sunday morning the show organisers did not turn up to a meeting with the exhibitors that had been arranged the previous evening, and for a while security staff were on the verge of cancelling the rest of the show as many exhibitors were saying that they were going to pack up early and go home. Fortunately for the small queue outside common sense prevailed and the show was opened on time.

Most exhibitors remained to welcome slightly more visitors than the previous days, bringing the overall attendance figure for the show to an estimated 3,000, about a quarter of the minimum that had been expected.



In desperation this exhibitor set up a satellite stand in the aisle and offered bargain reductions.

Some exhibitors did pack up early. Ten Out Of Ten Educational Systems left at noon and director Peter Davidson said: "We've done loads of shows and our products always sell really well, but there was no one here to sell them to." Tony Ianiri of Power Computing said it was "the most disgusting show we've ever been to since we've been in business."

David Link of HiSoft took a less emotive view: "It was a disappointing show," he admitted, but pointed out that there were many factors that could have caused the poor attendance, including the extremely cold weather and the fact that it had been held just one week after the Future Entertainment Show.

Most visitors we spoke to complained about the £7 entrance fee and £6 parking fee. One family had paid £50 all told to get into the show and said they could not find enough special offers to recover that cost. Although there were many unexpected bargains – the A600 was selling for £99, the A570 CD-ROM drive for £70, KCS Power PC boards for £25 – serious Amiga software was almost impossible to find, the most prominent goods on sale being CD-ROMs for the PC, disk boxes and a dozen companies selling, of all things, inkjet refills.

Tim Collins of show organisers Westminster Exhibitions Ltd said: "Please leave a message after the tone."

Jeff Walker

SILICA IMPORT US MEMORY

Silica is to distribute three memory expansions from States-based manufacturer DKB.

The DKB A1200 fits in the Amiga 1200's trapdoor slot. It comes with a 68881 maths co-processor clocked at 16MHz and two 72-pin industry-standard SIMM sockets. These enable the board to use cheaper SIMM memory modules than the custom chips required by other boards. It costs £129 without any memory chips.

For the A3000 and A4000, DKB produce the DKB 3128. It's a Zorro III-based expansion board that will enable users to upgrade their machines with full 32-bit memory, giving a maximum expansion capability of 128Mb. The board contains four SIMM sockets, each of which can be fitted with a different capacity SIMM module. The board costs £269 without memory.

Finally, Silica are also to distribute DKB's MegaChip upgrade, which boosts the Chip RAM of A500s, A1500s, A2000s and CDTVs by 1Mb. MegaChip costs £154.

Silica Systems ☎ 081 309 1111.

Floppy drive price drops

Cumana are currently selling their CAX354 floppy drive for the bargain price of £49.95.

The drive provides 880K of formatted storage space per disk. It is compatible with all Amigas except for the A4000.

All drives are sold with a 12 month warranty and a 30 day money back guarantee. You can order them direct from the manufacturers.

Call Cumana ☎ 0483 503121 for more information.



Cumana's CAX354 high-quality disk drive is selling for the bargain basement price of £49.95. You can order it direct from them.

Take-away à la cartridge

The world's first PCMCIA-based removable cartridge hard drive has been developed by storage specialists SyQuest.

Called the SQ1080, the drive will plug into the PCMCIA slot of any computer with a Type II or Type III PCMCIA slot.

The drive accepts 1.8-inch cartridges, available with either 80 or 60Mb capacities. The average access time for these cartridges is 16 msec. The transfer rate for the 80Mb cartridge is 1.6Mb per second, and an equally impressive 1.3Mb per second for the 60Mb cartridge.

Drives should be on sale by the middle of 1994. They will be sold at a trade price expected to be below £250. This will include one cartridge; additional cartridges will cost in the region of £40.

This equates to a cost per Mb of 50p, which is likely to cost the end user £1 per Mb, as opposed to the current ratio of £35 per Mb for flash RAM PCMCIA cards.

SyQuest ☎ 01049 751 560500.

STEPPING OUT

The *Amiga A1200 Insider Guide – Next Steps* is the latest release from Bruce Smith Books.

Designed to follow on from the previous volume, and also for those who have upgraded to the A1200 from earlier Amigas, it covers such topics as Commodities, the PCMCIA slot, Intellifont, MultiView, Preferences and file recovery.

Two chapters are devoted to hard drive installation and use, offering tips on how to back up your files and how to install programs to hard disk.

The book aims to present all this information in a clear, no-nonsense and jargon-free manner. It costs £14.95 from Bruce Smith Books ☎ 0923 893493.

Quarterback upgraded

Central Coast Software have announced the arrival of an upgraded version of their hard disk backup package, *Quarterback*.

The sixth incarnation's main addition is a program called *Schedule Pro*, which enables the user to automatically run any AmigaDOS program or ARexx script at a given time. It will also display reminders on the screen. Both program execution and reminders can be tagged to occur just the once or on a regularly repeated basis.

Quarterback's software-based compression has been improved, so that now, in most circumstances, it can read and compress hard disk data just as quickly as it can write it to a floppy disk.

Quarterback 6 will be distributed in the UK by Meridian ☎ 081 543 3500. A price has yet to be fixed.

CD32 GAINS ACCEPTANCE

Sales of Commodore's CD^{32} console look set to improve still further, following an announcement by HMV that they are to stock it.

HMV will be selling the CD^{32} in 50 stores across the country. HMV are also planning to carry a wide range of software for the console.

John Smith, Commodore UK's national sales manager, said bullishly: "HMV has... become one of the UK's best home entertainment retailers. Amiga CD^{32} is a natural for HMV because it's the UK's best home entertainment machine."

Over 65,000 CD^{32}s have been sold throughout Europe since the launch of the machine in September.



The AS Shareware Collection volume VIII

How to access and use this issue's cover disk.

The symbol ☛ means do not type a return – keep typing to the end of the next line. ▼☛ means type a space, then keep typing to the end of the next line.

GUI-GURU

Workbench 1.3 and above

GUI-Guru is the ideal aid for programmers. All of you at one time or another must have witnessed those mysterious Guru numbers provided by the Amiga before a software error forces a re-boot. *GUI-Guru* will translate such numbers into more meaningful text messages, meaning you can more effectively track down the errors in your program that caused the crash.

Unlike other similar programs, *GUI-Guru* runs in a window. Just type the Guru code into *GUI-Guru*'s requester and it will tell you its meaning. To run the program, double-click on its icon or type its name from the Shell.

ASPAINT

All Workbenches

This archive contains the latest version of Jason Holborn's paint package written in AMOS. Both source code and a compiled version are included, so you can load the program into the AMOS interpreter (it works with *Easy AMOS* and *AMOS Pro*, too) while following the tutorial or run it as a stand-alone program.

This month's add-ons include tools to draw filled circles and to grab part of an image as a brush. Turn to page 86 to see how they have been implemented in AMOS.

ADDRESS BOOK

All Workbenches

Here you'll find the source code to accompany our ongoing C tutorial (beginning this month on page 68). All of the modules necessary for compiling the program with *DICE* are included, as well as a pre-compiled version that you can run by itself – just open a Shell, change into the directory where you've de-archived the program, and type: `address.x`.

TOOLS DAEMON

Workbench 2 and above

This is one of those unassuming yet desperately useful little programs that can make your life that little bit easier. With it you can access your programs by selecting them from a Workbench menu, rather than having to dig through loads of nested drawers in search of their icons.

If you have access to Commodore's *Installer* utility, then you'll be able to install *Tools Daemon* by just double clicking on its Install icon. Otherwise, you'll have to install it from the Shell. Here's how:

Once it's de-archived, copy the **ToolsDaemon-Handler** into the **L:** directory of your system disk. If you've de-archived onto a disk called **Programs:**, then you would copy the file with the following command:

```
copy Programs:ToolsDaemon-☛
Handler L:
```

Now drag the **ToolsDaemon** icon into your **WbStartup** drawer, and drag the **ToolsPrefs** icon into the **Prefs** drawer of your boot disk. If you don't already have it, you must also copy a file called **reqtools.library** into the **libs:** directory of your boot disk. Assuming again that the disk you have de-archived to is called **Programs:**, you can do this by typing:

```
copy Programs:libs/☛
reqtools.library libs:
```

Once you have re-booted and *ToolsDaemon* is running, double click on *ToolsPrefs* to get it running too. You can now drag the icons of your favourite applications into the *ToolsPrefs* window. Once you have saved, you will be able to run these programs by simply selecting their names from the **Workbench Utils** menu. Consult the supplied documentation for more details.

REND24

Workbench 1.3 and above

Since we mentioned this amazing program in issue 30's video feature, we've had loads of calls asking where it came from – well, here it is.

Rend24 can perform all manner of file conversions – JPEG, GIF and 24-bit IFFs into other IFF formats – and can scale images to new sizes. It can also turn sequences of images into an ANIM5 animation, you can choose whether or not to have the palette locked – and more!

If you have Workbench 2 or above, installation of *Rend24* is easy – simply double click on its Install icon once you have de-archived it. You will be asked if you wish to install the libraries – reply "**yes**" – and if you wish to copy *Rend24* to your c: directory – again, reply "**yes**".

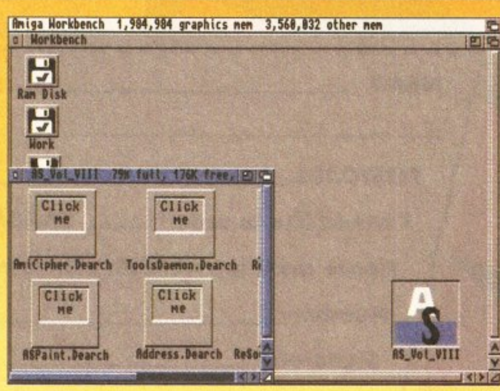
If you've got Workbench 1.3, type the following commands into the Shell (assuming you have de-archived on to a disk called **Programs:**):

```
copy Programs:libs/#? libs:
copy Programs:Rend24 c:
```

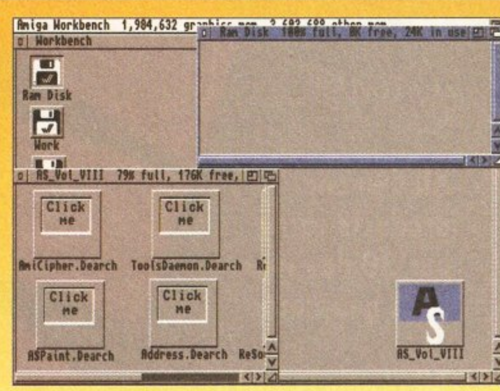
SO JUST HOW DO YOU GET AT ALL THIS

❶ First you should switch on and boot up your Amiga with Workbench. The programs on the disk have all been compressed, and must be de-compressed before they can be properly used. This process is pretty much automatic, so long as you follow the steps detailed here. Before you go any further you need to decide where you want to de-compress the cover disk files to. If you have plenty of RAM, you may want to use the RAM disk. Another option is to de-compress to your hard disk. Otherwise, you'll need to de-compress onto another floppy disk. If you choose this last option, then you'll need to have several blank floppies standing by. If you only have a single floppy drive, be prepared for lots of disk swapping. You can format floppies from the Workbench by single-clicking on their icon and then selecting the **Format Disk** or **Initialize** menu option (all depending on the particular version of Workbench you are using).

Now insert the copy that you've made of this month's cover disk. You'll see the **Amiga Shopper** icon appear on the screen.



❷ The next step is to double-click with the left-hand mouse button on the **Amiga Shopper** icon. A window for the disk will then open, in which will be displayed the four icons for the software on the disk this month. The programs are all stored as archives and can be accessed via the icons shown in the window, whose filenames are terminated with the characters "**.Dearch**".



❸ Let's say that you want to de-compress the *ASPaint* package. You'll need to decide where you want the de-compressed material to be stored. If it's onto a floppy, then insert the disk and open its window. If you want to place the files on your hard disk or your RAM drive, then open their window instead. (Bear in mind that the contents of your RAM drive are lost when the power is switched off.)

VITAL: READ THIS FIRST

The first thing that you *must* do with your cover disk is to write-protect it. To do this, ensure that the movable plastic tab on the disk is in the open position – that is, you can see through the hole. This means nothing can now be written to the disk, especially viruses, which are the last thing you want.

The next important step is to make a back-up copy of the cover disk. The easiest way to do this is to open a Shell window and then type the following at the prompt:

```
diskcopy df0: to df0:
```

Your Amiga will now ask you to insert the SOURCE disk (that's the cover disk) in **df0:** and then press the **<Return>** key to continue.

Your computer will now read some data from the disk before another window appears asking for the DESTINATION disk (the empty disk that you want to make a copy on). You'll find that you need to swap disks like this several times.

If you have more than one floppy drive, you can copy from one drive to the other, like this:

```
diskcopy df0: to df1:
```

Right, now that you've made a copy of the cover disk, hide the original in a very safe place and work *only* with the duplicate.

CAN'T READ THE DISK?

We duplicate tens of thousands of disks, so inevitably a very small number will be corrupted. You'll know if this has happened to you because you'll get a message saying either it isn't a DOS disk or that a READ ERROR has occurred.

The solution is straightforward. Just send the faulty disk to the address below, enclosing a SAE for the return of your replacement disk and we'll pay the return postage. The address is:

***Amiga Shopper* 34**
Discopy Labs
PO Box 21
Daventry NN11 5BU

A replacement disk should then come rattling through your letterbox within a couple of weeks.

You can now run it from the Shell by typing *Rend24*, or from Workbench by opening your **C** directory (Workbench 2 or higher, as you need to select **Show All Files** from the Workbench **Window** menu) and double clicking on its icon.

Rend24 is shareware, so if you find yourself using it a lot please pay the $30 fee to the program's author. More details are in the supplied documentation file.

AMBUSH

Workbench 2 and above

Ambush has been written to solve a problem. Many older programs, written when 1.3 was the dominant operating system, fail to specify which screen font they want to use for things like window and screen titles, requesters and so forth. This is fine for Workbench 1.3, which defaults to the built-in Topaz font. But many Workbench 2 and 3 users like to specify different fonts for their screens and windows. Running one of these older programs on such a screen causes problems – if the new font is bigger than Topaz, the requesters often don't have enough space to print all the text.

This is where *Ambush* comes in. *Ambush* will intercept programs such as these and give them what they need – a Workbench screen with a Topaz font, meaning that all of their text is displayed as intended.

Ambush is designed primarily to be run from the Shell, usually as part of a script. You can modify the icons for your applications that require *Ambush* such that *Ambush* is run first before they open, thus ensuring they open on the correct screen. See the documentation file for details on how you can set this up. A number of pre-written scripts are supplied for use with several popular packages. You'll find these in the **AmbushScripts** directory created after you've de-archived the program. If you find *Ambush* useful you'll probably want to put it somewhere in your command path – by copying it to your **c:** directory, for instance.

AMICIPHER

Workbench 2 and above

Having de-archived *AmiCipher* you'll find two drawers, one for each of the two parts of the tutorial on page 61.

AmiCipher is a small encryption and decryption program. Both versions are fully executable – just double click on them to run.

The real value of the programs, though, is in the knowledge you can gain by studying their code. They are written in C, and in the **Program_Files** directory of each version you will find a number of source code, header and object files. The programs have been compiled with *SAS/Lattice C* – you should be able to compile them under different compilers with minimal changes, assuming you have access to Commodore's Includes and Libraries.

RESOURCE DEMO

Workbench 1.3 or above

This is a demo version of The Puzzle Factory's *ReSource* interactive disassembler, reviewed last issue. If you like the look of the demo, then turn to page 114 to see how you can win a copy of the complete package.

Once you've de-archived *ReSource*, say, for example, onto a floppy disk called **Programs:**, you can then install it on to your system with the following commands typed from the Shell:

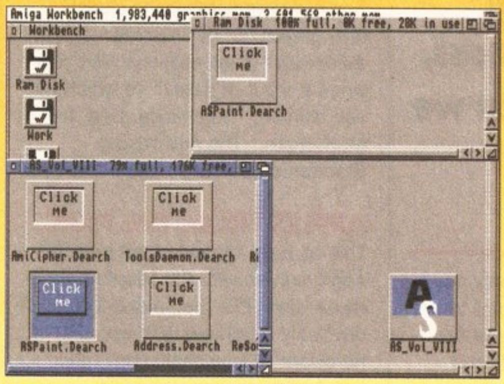
```
copy Programs:RSDemo c:
copy Programs:RSDemo.info c:
copy Programs:libs/#? libs:
copy Programs:s/#? s:
```

You can now run *RSDemo* simply by typing its name from the Shell. A full tutorial text, along with example file, is supplied with the archive: read the text file first and load the second into *RSDemo* to find out more about the program. Further information can be gained by making use of the demo's on-line help feature – just select **HELP** from the left-most menu.

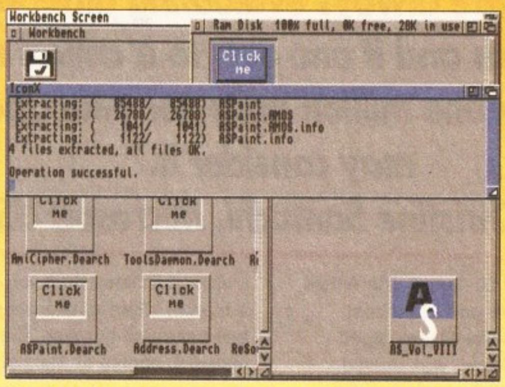
VIRUS CHECKER

Last minute technical problems have meant that we were unable to include *Virus Checker 6.33* on the cover disk. AS

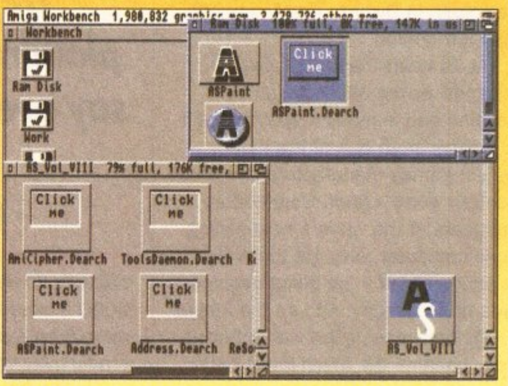
LOVELY SOFTWARE ON YOUR DISK?



❹ Drag the icon (say **ASPaint.Dearch**) into the destination window. (Drag an icon by putting the mouse pointer over it and keeping the left mouse-button pressed. Release the button when you've placed the icon where you want it.) Now double-click on it. The de-compressing procedure will automatically begin, and another window called **IconX** appears on-screen to tell you how it's going.



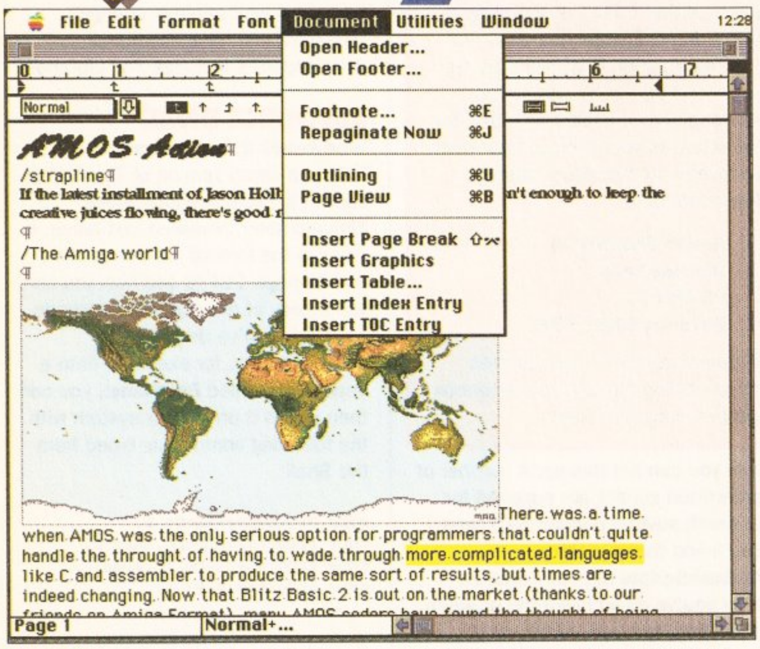
❺ In the **IconX** window will be listed all the files as they are extracted from the archive. If you are using an Amiga with only one disk drive then unfortunately you'll have to get involved with a fair bit of disk swapping. A System Requester window will appear each time you need to swap disks – simply put whichever disk is requested in the Amiga's drive. (Keep the source disk write-protected to be safe.)



❻ Once the **IconX** window has vanished, the source window will still appear to contain only the **ASPaint.Dearch** icon – that's because the window isn't automatically updated. Click first on the window's close gadget and then open the window again. It will reopen with the packages' icons displayed in their full glory. You can then run the programs or load the files as normal.

Why not Word

Why is "serious" software – like Word – never adapted for the Amiga? Mark Smiddy asked Microsoft to find out. And how do the top Amiga word processors compare with PC and Mac classics? You might be surprised…



There was a time, not so many years ago, when people gazed in awe at a machine capable of displaying 4,096 colours on screen at once; a machine with the ability to run more than one program at once; a machine capable of addressing an entire 9Mb of RAM without special software trickery and with the power to use it.

There was a time when you had to go to a specialist dealer if you wanted to buy an Apple Macintosh and PCs were strange things made by IBM and used by odd little men in large office blocks. But that time has gone. Everyone and his Taiwanese brother makes IBM-compatible PCs (and faster than IBM ever dreamed of), and you can now buy an Apple Macintosh in Dixons. The Amiga has been left behind.

At its heart the Amiga was designed as the ultimate games machine and in many respects it still is. It came from one of the then biggest games manufacturers in the Western world – Atari. Commodore, producers of the world's best-selling home computer, only got the Amiga by accident and in so doing became lords of its destiny. And so the Amiga 1000, later redesigned with a better case, became the much-loved A500 – the ultimate games computer.

It has to be remembered that at this time games consoles were something of a joke. Sega and Nintendo were still using 8-bit technology, Atari's ST was cheap, fraught with compatibility problems and held back by a nasty operating system, and the 8-bit machines were still big business. People still took home computing seriously and hobbyists were almost as prevalent as games players.

At the other end of the market, traditional personal computers – fast becoming the office workhorse – came as a three-box set: monitor, CPU and keyboard. The Amiga's original design fitted the bill but had been too expensive while the A500's single plastic box with outboard modulator looked too cheap and nasty to do the business. The Amiga 2000 looked the part but it cost more than a similar PC and good productivity software was scarce.

In the late '70s and early '80s, when personal computing was still in its infancy, a lot of corporate businesses invested heavily in IBM machines. Not because they were particularly good, but because the company had a reputation for producing solid and reliable gear. Not long after, a number of firms in the Far East realised the machine was nothing more than a collection of off-the-shelf parts and started to build their own, cheaper and faster than IBM. Even today, most IBM clones run much faster than the same-price IBM equivalent.

With so much money being invested in the hardware, it was simply a matter of time before the big guns in the software world realised that a substantial investment would quickly pay off.

It's all a matter of installed base and market share. In other words, if your software has a 20 per cent share of the market you're doing well, right?

Well, not necessarily! If that market consists of an installed base topping 100,000 then a 20 per cent share equates to 20,000 units. However, with an installed base of a million machines then you only need a market share of two per cent to sell the same number. The market research people at Microsoft and others were quick to realise this. Microsoft were particularly fortunate to develop the disk operating system for IBM machines (MS-DOS) and in the process made Bill Gates one of the richest men in America.

The Amiga, on the other hand, had a very small installed base. Most units went to home users in the form of the cheaper A500, and most of those were sold, not in their native America, but in Europe. The Americans (known for having more disposable income than their European counterparts) viewed the A500 as being the cheap option and opted for PCs for home use. This can be explained in one of two ways. The Amiga is a more complex machine to program than a PC, and therefore there was less software for it; and apart from being a lot more expensive, the A2000 was not much of an improvement on the A500.

In the end, software sells hardware, which sells software, and so on. It's a vicious circle in which only the best can survive and the rest fall by the wayside. (A fate met by many 8-bit machines in the early days when they were outstripped and out-gunned by the Sinclair Spectrum's huge software base.) In this category you can include (for those with good memories) the Oric Atmos, Acorn BBC, Jupiter Ace, MTX 512, Dragon 32 and so on. Even the mighty Japanese failed to make an ingress – and live up to their advertising promises – with MSX. Some may remember the classic ditty played out by line-drawn crash dummies: "What happens next year when it's out of date?" To which the son chimed, "No chance, Dad, this is MSX, mate." The Advertising Standards Authority missed that one.

> ***"We aren't presently developing anything for the Amiga and I don't think that we have any immediate plans to do that either. We are always evaluating different platforms and if one gets to a critical mass, say over one million units per year, then we may consider it."***
> ***– Christine Santuchi, Microsoft US***

APPLES FROM THE PARC

This all begs the question: how did Apple survive with the Macintosh? In those days, like the Amiga, it was devilishly expensive with weird hardware no one could copy (and woe betide anyone who tried). Everything about the Macintosh went against the grain of current thinking; nothing was standard. The printer port was serial and had custom designed sockets, so you had to buy a special Apple printer.

The Motorola 68000 was housed in a cute portable case with its built-

for Workbench?

in nine-inch, monochrome screen. The disk drive was single-sided, multi-speed with a 400K storage capacity and no directory structure to speak of. With just three applications at launch (count them): a word processor, spreadsheet and a database, the machine survived for one major reason – Apple managed to get the backing of Microsoft, then (as they are now) one of the largest software corporations in the world.

In the space of a few years Apple had grown from a little two-man operation, building machines in a garage for computer enthusiasts, to a major concern. Like IBM, it had previously made little three-box affairs with standard parts and expansion through internal slots. This had ensured it a place in smaller businesses – those which could not afford IBM gear – and the name was becoming known. The Macintosh was only the second real micro to employ a mouse and WIMP technology, carried on from Apple's earlier attempt, the Lisa.

Interestingly, Apple borrowed the WIMP idea from the think-tank at Xerox's Palo Alto Research Centre. If Xerox had been quicker to catch on, the history of graphical user interfaces would be rather different.

COLD AMIGA SOUP

This left Commodore, an ex-typewriter firm, somewhere out in the cold. Up to that point they had been manufacturing PCs in the form of the PET – the world's first PC and ancestor of all today's machines. Their later micros, the 5K VIC-20 and later still, the C64, would only make inroads in the home market, failing to take any business from IBM.

Then the Amiga arrived, quite by accident. The only burgeoning market at the time was games and, after all, the Commodore-Amiga was designed as a games machine, so Commodore's marketing people saw a window and dived straight through it – altering the course of computer history for ever. We could blame the faceless marketers for making the wrong choice, but with hindsight it is easy to see how games have kept the Amiga (and possibly even Commodore) from the scrapheap.

Even while Commodore's people were arguing about whether to sell the Amiga to businesses or homes (at that time there was not the crossover we see today) some developers saw a chance. A small glimmer of hope – a possibility that the machine could bridge the gap between the study at home and the office at work. Household names like Gold Disk and Softwood are two of those early pioneers who are still fighting against a tide of games in order to make an inroad into the professional market.

Today's market is more confusing than ever. You can walk into just about any large Dixons and come out with a 386-based PC or a 68030-based Apple Macintosh, complete with monitor, separate keyboard and bundled software. Why then can't you go into the same place and get an Amiga A4000/030? What chance does the Amiga have if it gets bundled with the likes of Sega and Nintendo?

LAST AMONG EQUALS?

These questions are best addressed by someone much closer to the problem, Commodore's recently installed Managing Director, David Pleasance. Pleasance is a particularly knowledgeable and approachable individual – which I consider somewhat unusual for someone of his status. Within minutes of meeting the man you feel at ease. Though a marketing genius, Pleasance remains a quiet and disarming individual whom you feel has earned respect rather than demanded it. (From personal experience, I can hereby state that he isn't frightened to share a few beers with the locals either.)

The A1200 is not a cheap games system, it is a powerful home computer that just happens to be very good at playing games. Of course, no one in their right mind would consider lining the A1200 up against the high-end PCs. Yet stores will place 8-bit Amstrad PCWs on the same shelves as Apple Performas and high-end PCs. The A1200 is a 32-bit machine and orders of magnitude more powerful than the Z80-based PCW. So where's the sense in all of this?

However, Pleasance began by talking about the A4000:

"Dixons don't want to stock something which we're asking a price for that they think is out of line with the market [a pause] and they're probably right."

So why is the price so high?

"I think if we're perfectly candid, we are very competitive in the home computer market. The aggressive pricing and stance we've agreed this year with the A1200 and certainly with CD32... we're selling loads of products but we're not making very much margin."

The state of the market and seasonal market forces also share some of the blame:

"We only have limited resources and during the run up to Christmas we have to concentrate on the consumer products. Our capacity to manufacture is limited, too, and it doesn't make any sense to us to make a machine that isn't going to sell in volume.

"That doesn't mean to say that 1994 will stay the same and I will be turning my attention to the A4000 and the way it's marketed throughout Europe. It's safe to say now that what happens in the UK is being replicated throughout Europe."

STAND AND DELIVER

So will the A4000 ever compete in the high-street? Pleasance refused to be drawn on this issue further, but he was quick to point out the

WHAT IS WORD THEN?

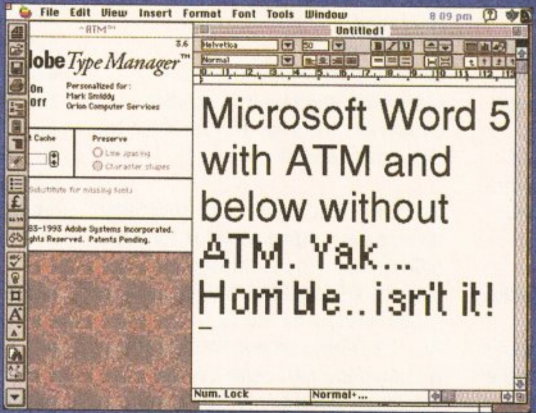
Mention *"Word"* to any computer professional and they'll instantly understand. Microsoft's premier word processing package is also one of the most expensive and complex word processors in existence, currently costing a hefty £299. *Word* has been around for a while now and it could have probably kept going at this price on sheer pose value ("My word processor cost more than yours!").

Yet all that money gives you a program that can't display PostScript fonts on screen (unless you use *ATM*), and while it imports graphics, it can't easily flow text around them – and even then contour flows are impossible. Yet Amiga offerings like *Wordworth* and even *Pen Pal* can automatically flow text around the outline of an image, no problem at all.

True, *Word* does come with a whole list of other features, but the vast majority of users will never need them. The Mac version, for instance, can embed a sound sample or even a QuickTime movie in the text. This means you can leave your colleagues a document that includes movie footage of what you are trying to say – very handy, I'm sure! The PC version for Windows has other extras such as watermarks – faded backdrops running behind the main text.

There is little doubt that Microsoft have worked hard to make *Word* the next best thing to a desktop publishing program without losing the capabilities of a true word processor, but some things still seem like compromise or plain oversight. Moreover, the company has slowed down development of Mac *Word* in preference to the PC platform. Given the genuinely useful abilities found in *Final Writer* and those proposed for *Wordworth 3*, a lot of us will soon be wondering whether all the fuss about *Word* is justified.

Still, with all the Amigas out there, could we expect Microsoft to "see sense" and convert their world-famous application to our favourite home and business computer? It seems not – Christine Santuchi, of Microsoft US, told *Amiga Shopper:* "We aren't presently developing anything for the Amiga and I don't think that we have any immediate plans to do that either. We are always evaluating different platforms and if one gets to a critical mass, say over one million units per year, then we may consider it."



Adobe Type Manager (also known as "ATM") isn't just good — it's an absolute essential if you want to work with PostScript on the Mac or PC under Windows.

unprecedented success currently being enjoyed with the A1200 and CD32. He relates a tale where one major High Street chain got it very wrong indeed, a decision which left them almost cap in hand at Commodore's mercy:

"They currently won't stock the CD32 because they want a larger margin than I am prepared to give them. However they tried to do without us and sadly [at this point a whimsical smile crosses his face] the A1200 has taken off like a rocket. They wanted me to send them 20,000 A1200s last week and I just couldn't deliver."

But a lot of these machines are just going into homes and probably won't see a serious application in their whole working lives. What has happened to the Amiga and was the A1000 ever considered a serious office-style machine?

"The Amiga 1000 was unashamedly launched as a business machine and a previous managing director of Commodore (who shall remain nameless) physically threw two people out of the building because they dared to bring in a game to show him on the A1000. Those two people went on to head Psygnosis... and all because they had the audacity to write a game for a business machine.

"The software industry did not rush to make serious software for the machine – particularly the likes of Microsoft. I think it was realised then that the machine was also capable of playing games so now we have had a job to re-establish the Amiga as a serious machine.

"I think in this country we've been spectacularly unsuccessful at properly positioning the A4000, A3000 or even the A2000 for that matter, as a serious machine."

To which he adds bullishly: "I can absolutely promise you that is all set to change."

Seeing that Microsoft have more or less ignored the Amiga, how does he view the future? Given that the machine is going from strength-to-strength, it seems reasonable to suppose that the big guns cannot afford to ignore it for much longer. So is it likely that Microsoft will ever develop for the Amiga?

"No," he replies with confidence, "but they won't need to.

"The new generation of machines have a RISC core, will be DOS compatible and will run *Windows NT*. We're taking a 64-bit RISC processor, adding to it a 3D rendering engine with texture mapping and so on – all included on the chip – and we're wrapping it with the AAA chip set. We're currently predicting a performance ratio compared to the AA [AGA] chip set of somewhere between 10 and 20 times current speeds. This will form the heart of our new high-end workstations and you'll have full compatibility with DOS – no bridgeboards required."

It sounds too good to be true, but Pleasance claims the new machines will run all the current Amiga software too. "The head of our Research and Development team, Lou Eggebrecht, is the best in the business. He was head of the design team that produced all the chips for the IBM PC; he also worked for Franklin computers [no connection with Steve Franklin], a company that very nearly produced a Macintosh clone, before going bankrupt a few years ago.

"Virtually anything you care to mention, he's been involved with. Moreover, the first-pass silicon on AAA was over 95 per cent functional – a performance that was previously unheard of."

He has a point – how many programmers can claim their software is 95 per cent bug free the first time it's compiled? But back to the questions. How many arms and legs are these new mega Amigas going to cost?

"My understanding is that the new design is intended to do anything the 586 [Pentium®] can do and knock the socks off it, but it will be directly in line with the 586 pricing. If they reduce prices then so will we. I also understand that the new chips will not just run *Windows NT*, they will also do it about five times faster."

I said it sounded amazing.

"Amazing is the not the word. They're the donkey's bollocks."

> ***"The new generation of machines have a RISC core, will be DOS compatible and will run Windows NT. We're taking a 64-bit RISC processor, adding to it a 3D rendering engine with texture mapping and so on – all included on the chip – and we're wrapping it with the AAA chip set."***
> ***– David Pleasance, Commodore UK***

AMIGA CLONES?

Okay, so much for the high-end machines. It is generally regarded that IBM's PC is the best selling business micro of all time, solely because so many people copied it. Is there any chance that Commodore would ever license their custom chips to Far-East manufacturers? If they did, it would mean cheaper Amigas for everyone, wouldn't it? Pleasance is absolute and resolute on this point.

"Now we've abandoned production of 16-bit technology, this is the only thing that Commodore might consider allowing people in certain third-world countries to manufacture.

A LOOK BEHIND THE SCREENS...

There's a bewildering range of machines on the market today, but remove all the bolt-on goodies and it really comes down to just three basic configurations.

To help you decide, we set up a little "blind date" to separate the men from the boys. Answers at the end...

BUYER: Do you offer me the possibility of pre-emptive multi-tasking on all models past and present?

A: Only if you get me with *Windows NT, DesqView, Unix* or *OS/2*. Of course, most machines do come with *Windows 3* as standard now.

B: No, but I'm working on it. Co-operative multi-tasking is standard with *System 7*.

C: Of course, my operating system kernel makes me the first microcomputer to be supplied with pre-emptive multi-tasking as standard.

BUYER: In that case, does you mean I could increase my productivity by formatting several disks at once, say?

A: Well...

B: Why would you want to do that? Next you'll be asking if I can format a disk in the background while you get on with some work!

C: Certainly. Four disks at once if you have enough drives; and you can still get on with your work while the disks are being prepared.

BUYER: I enjoy music. Who can offer me high-quality stereo sound?

A: Several cards are available with a variety of different options: but make sure you get one that's compatible with your software.

B: Me! I also have an internal sound sampler — but a good music package will cost you an arm and a leg.

C: I can offer you four-channel stereo sound over nine octaves, with a wide range of software to drive it.

BUYER: Inter-machine compatibility is important to me. Which of you has standard interface connectors?

A: I have.

C: Me too.

B: Standard! If I conform to a standard I won't be in a position to charge the earth for add-ons such as disk drives and printers.

BUYER: I want to use a lot of different applications, some of which require different screen resolutions and colour configurations. Can you change screen modes on the fly?

A: Yes. I have always thought this was an important aspect of any computer that has multi-tasking, although this is less practical if *Windows* is running

B: Errm, no. You'll have to make any necessary changes and re-boot me.

C: Of course. You will even be able to view different screen configurations on the same monitor simultaneously.

BUYER: I want to display at least 256 colours on a television display. Which of you is able to do that, then?

A: I usually only work on a monitor, but this can be achieved using extra hardware.

B: Who on earth would want to work on a TV?

C: Not a problem. I'm compatible with many TV systems around the world. 256 colours is not a problem – how about 16 million?

BUYER: Do you come with a hard disk as standard?

A: Typically I come fitted with a 40Mb or 80Mb unit, although you can specify a larger one if you prefer. 80Mb is the absolute minimum if you want to run *Windows* applications, though. On average each one will consume about 10Mb of disk space.

B: 40Mb – my operating system is so large these days it is almost impossible to run it from even a high-density floppy.

C: No. I run perfectly well from floppy disks. I can accept a hard drive



This 24-bit composite was created in under an hour – by someone who had never used Photoshop before.

"The moment we give up our proprietary technology is the moment you can say good-bye to Commodore. There is no suggestion whatsoever that we will ever give that technology to someone else. Speaking of technology, we believe that satellite and cable television is going to be big in the home and we may look at something of that nature for video handling."

Certainly some people in the software industry believe they would be better off if Commodore could sell more machines. What do you have to say to them?

"Remember MSX? Seriously, I can remember having conversations eight and nine years ago with people who were saying that when MSX arrived, it would blow Commodore away. The Commodore 64 went on to sell millions and the MSX? Rest In Peace!

"As far as the current technology goes, I can't get enough A1200s or CD32s to sell so why would I want to give up that part of the market?"

HARD DRIVE HOLD UP?

This is all fair comment, but some developers have argued that a major problem with the A1200 as it stands today is that Commodore do not offer users an easy-to-order base model with a standard built-in hard disk drive. Isn't this a problem which should be addressed at source rather than being left to the independent dealers?

"I don't agree that the lack of a standard hard drive is holding the Amiga back. From our figures, 60 per cent of all Amiga 1200s put out through distribution channels are sold with a hard disk drive added.

"The problem, as far as we see it, is that the hard disk market is even more volatile in terms of price reductions than the PC market. We can't keep up with the change in demand from 80Mb to 100Mb to 120Mb and who knows what else.

"The independent distributors are happier like this – it gives them the chance to offer their customers a choice. I think we give the end-user a better deal this way.

"Imagine if we sold them a machine fitted with an 80Mb hard drive then six months down the line they wanted 200Mb – do they take out the 80Mb and throw it away? We made that mistake with the A600. We started with a 20Mb, then a 40Mb then a 60Mb, and because we had to buy in bulk to service the market we've still got 20Mb-A600s sitting around that nobody wants."

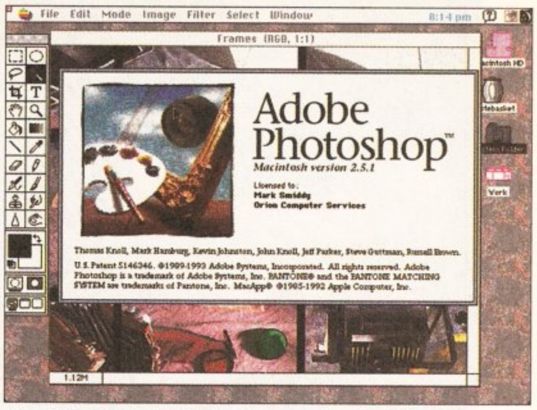
AMIGA ON THE MOVE

Finally, given the current spate of new machines in the range (and all these other exciting new developments), is there any hope of seeing a portable Amiga at any point in the near (but foreseeable) future?

"No. I can honestly say that, because there is no chip technology in Commodore at this time that is of a low enough power consumption to support a portable machine. They don't exist and it cannot be done.

"And besides, the only people who seem to want them are a handful of journalists who want to write about them."

Certainly not David, we want to write *on* them.



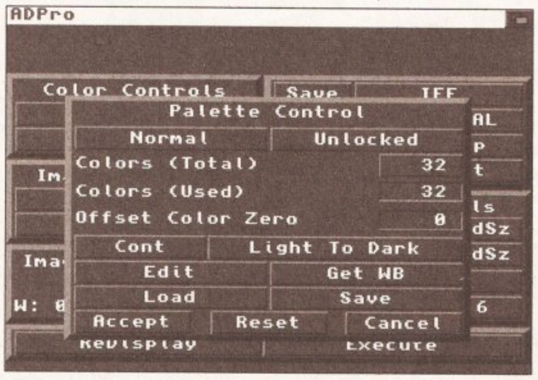
Macintosh Adobe Photoshop resplendent in 256 colours – several million less than it's capable of.



This horrifying distortion effect – straight from the hall of mirrors – is just one of Photoshop's entourage.

THE GRAPHICS EQUATION

By this point in our story, it certainly sounds like the Amiga has received something of a raw deal in terms of the professional productivity software available for it. This does seem unfair, especially when you consider the one area where the Amiga has always excelled: graphics. At the time of its launch there was nothing around that even came close, yet now that lead has been lost to IBM and Apple – both have powerful graphics engines and the software to run on them.



Art Department Professional has a simple, if bug-ugly front end, but the program certainly does the business.

Adobe were particularly quick to pounce. Not long after Apple introduced a colour Macintosh, the famous *Adobe Photoshop* was born. *Photoshop* is unique in many respects and about the closest thing to *Quantel Paintbox* this side of £10,000. The US government even granted Adobe a patent for *Photoshop*'s Duotone greyscale tinting system. *Photoshop* operates simultaneously on several different levels:

- As a paint package. *Photoshop* allows artists to create and edit up to 32-bit photo-realistic images.
- As a file-exchange program. *Photoshop* imports images from just about every format under the sun, including EPS, GIF, TIFF, 8-bit ILBM IFF, and so on – and exports data in just as many.
- As an image-retouching package. This is where *Photoshop* finds its real home. Images can be scanned in 24-bits and manipulated in all manner of ways. *Photoshop* is so good that even a raw beginner can create a composite image from two photographs in a matter of minutes. Not only that, *Photoshop* provides the tools to make the composite look so convincing it cannot be distinguished from an original image.

Will it ever make it to the Amiga though? Adobe say not. In spite of the fact that high-end Amigas are just as capable as the Macintosh and run similar native hardware, the company has no plans to invest at this time.

"We will not be porting [*Photoshop*] to the Amiga", said a spokesperson at Adobe USA. Whether or not Adobe will change tack later on is uncertain and they were unwilling to comment further.

In the meantime therefore, Amiga users will just have to make do with a mishmash of other systems. ASDG's *Art Department* will handle the format conversions and some of *Photoshop*'s image-processing operations and the recently-released *True Brilliance* will perform some of the re-touching. Nevertheless, even the combination of these two does not come anywhere near the power of *Photoshop* and, bearing in mind the fact that you can get it bundled with an A4 scanner for only slightly more than the equivalent Amiga bundle, the Macintosh hasn't got too much to worry about – yet.

continued on page 20

internally so you can specify a size to suit your needs and pocket. Most applications for my operating system are quite small because all the clever things are done in hardware or firmware already.

BUYER: One last question – how much do you cost?

A: That depends on what you have fitted. I am an open system and you'll need to know what you want before you'll know the price.

B: You can buy me in any Dixons for just £700 — although delivery is typically about a week. [Dixons Stockton, 6/12/93.]

C: Anything from £299 upwards.

Decided which you'd prefer? If we just pull back the curtain, we find that this week's 'blind dates' are:

A: A non-specific PC clone.

B: An Apple Mac Performa 400.

C: An Amiga 1200.

Did *you* make the right choice?



We are recognised in the Amiga community as one of the leading specialists in Hard Drives and Mass Data Storage.

AMIGA A4000/040

The flagship of the Commodore Amiga range. Based around the 68040 processor. Comes with a Hard Drive, 2+4 RAM and WB 3.0.

85 Mb version – £1899	340Mb version – £2069
130Mb version – £1919	426Mb version – £2149
200Mb version – £1939	540Mb version – £2299
250Mb version – £1979	

AMIGA A4000/030

The same specifications as it's big brother but designed around the 68030 processor. The A4000/030 comes with a Hard Drive, 1+1 RAM and WB 3.0.

(FOR 2+2 PLEASE ADD £69)

85 Mb version – £899	340Mb version – £1099
130Mb version – £969	426Mb version – £1199
200Mb version – £999	540Mb version – £1299
250Mb version – £1039	

AMIGA A1200

The A1200 sports many of the features of the A4000 series. Based around the 68020 processor with 2Mb of RAM and WB 3.0 as standard. A full range of Hard Drives are also available for the A1200.

Basic A1200 - £289	120Mb H.D version - £494
40Mb H.D version - £388	170Mb H.D version - £528
60Mb H.D version - £445	200Mb H.D version - £548
85Mb H.D version - £468	256Mb H.D version - £578



DESKTOP DYNAMITE PACK

The desktop Dynamite Pack contains 5 pieces of software written specifically for the AGA chipset, which includes DpaintAGA, WordworthAGA, Oscar and other with a total street value of over £300.
(PLEASE ADD £40 FOR DTD PACK)

GRAPHICS AND VIDEO

REAL3D 2	£378.50
ART DEPT PRO	£134.99
MORPH PLUS	£136.99
DPAINT 4 AGA	£ 66.00
DPAINT 4	£ 59.99
SCENERY ANIMATOR 4	£ 54.99
VISTA PRO 3	£ 44.99
MAKE PATH	£ 23.99
TERRAFORM	£ 23.99
SCALA MM210	£ P.O.A
SCALA MM300	£ P.O.A

UTILITIES

X-COPY PRO	£ 31.99
GB ROUTE PLUS	£ 32.99
LATTICE C V6.1	£259.99
DIRECTORY OPUS	£ 46.50
VIDEO BACKUP SYSTEM	£ 49.95
QUARTERBACK TOOLS	£ 47.50
DEV PACK 3	£ 53.99
VIDI AMIGA 12	£ 81.95
DISTANT SUNS V4.2	£ 39.99

MUSIC

STEREO MASTER	£ 29.99
BARS & PIPES PRO	£215.99
TECHNOSOUND TURBO	£ 58.50

WORD PROCESSOR & DTP

WORDWORTH 2	£78.99
FINAL COPY 2	£74.99
PENPAL	£28.95
PAGESETTER 3	£43.99
PRO DRAW V3.0	£64.99
PRO PAGE V4.0	£89.99

GAMES

CIVILISATION AGA	£ 39.00
CIVILISATION AGA UPGRADE (SEND YOUR DISKS AND DETAILS)	£ 19.00

PRINTERS

CITIZEN	
CITIZEN 240	£212.00
CITIZEN 240C	£234.00
PANASONIC	
KXP 2123 COLOUR	£210.00
KXP 2023	£178.00
HEWLETT PACKARD	
HP 500C	£290.00
HP 510	£246.00
HP 550C	£490.00

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A new word order

So, it's unlikely that we'll ever see an "official" version of Word for the current crop of Amigas. But do we really need one? Mark Smiddy reviews Final Writer and previews Wordworth 3, two state-of-the-art WPs that could teach the PC and Mac competition a thing or two.

If there's one thing that's guaranteed to lower software quality it's complacency borne from a lack of competition. It is encouraging to note therefore, that at least some Amiga developers recognise this. Softwood, creators of the amazing *Final Writer*, and Digita, producers of the equally incredible *Wordworth 3*, are typical examples. One could be forgiven for thinking that the two would be constantly at each other's throats, but nothing could be further from the truth.

The two have been neck and neck in a race to produce the ultimate Amiga document processor for several years now. Until then the main competition (according to Softwood founder, Woody Williams), had been *Pro Write*. Softwood's *Pen Pal*, developed almost single-handedly by Williams, set new standards by breaking the limit of screen colour printing and allowing users to print graphics in full colour. On the other hand, Digita were well-known in the Amiga world for their budget software when they released *Wordworth*, the first British-made Amiga word processor to really take the machine by storm.

What stands out is the way both parties recognise each other's strengths – while the competition is hot, each has nothing but praise for the other. But, as is reflected in our discussions with other developers such as Gold Disk, and Woody Williams himself (see box below), the unspoken undercurrent from both sides of the Atlantic though, is not "What can we do for the Amiga?" but "What can Commodore do for it?"

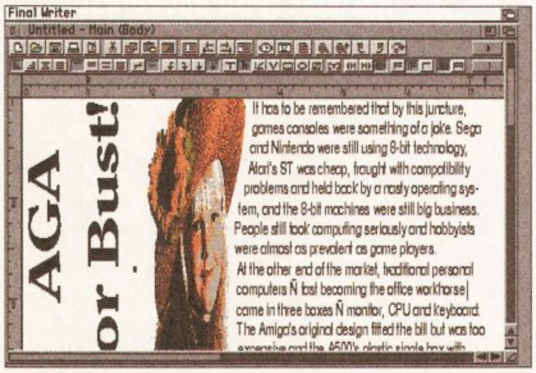
REVIEW: FINAL WRITER

In the wake of *Final Copy* 2, comes *Final Writer*. Bigger, better and stronger than its little brother, unashamedly borrowing ideas from *Word*, doing many things better and with genuinely useful features that will make Microsoft go green. As well as boasting full PostScript font compatibility, it has the unusual ability to print PostScript fonts on any graphics printer without requiring extra software.

Aimed squarely at the professional, *Final Writer* is the first Amiga word processor to run solely from a hard disk and needs at least 2Mb to run comfortably. Not surprising when you consider it comes on no less than seven disks and consumes a staggering 9.5Mb of installed hard disk space. Mind you, this includes a spelling checker with over 110,300 words and 826,000+ word thesaurus. And the 125 NimbusQ outline fonts and 100 EPS images will keep budding designers busy for a long time. Perhaps we should start to ask the question "Do we really need *Word for Workbench*?"

UP AND RUNNING

Getting started with *Final Writer* is so easy a child could do it. The installation procedure is fully automated using Commodore's Installer and the biggest problem most folk will encounter is ensuring there is enough hard disk space available. (The Amiga's filing system prohibits a reliable check on disk space, although the Installer does try.) Once installed, *Final Writer* is started by double clicking its icon from Workbench. At this point in the proceedings, *Final Writer* presents you with a screenmode requester, just like its predecessor *Final Copy*.



***Final Writer* has much of the same look-and-feel of Word, but it doesn't cost nearly as much. What's more, the graphics handling is better (even allowing for the fact that this shot is from an ancient Amiga).**

The choice of modes depends entirely on the type of machine you are running. A basic A500+ offers the current Workbench settings plus everything from low resolution (320 by 256) to interlaced high-resolution (640 by 512). AGA machines get even more modes and more colours – up to 256. With the exception of HAM and EHB modes, if the Amiga can display it *Final Writer* can use it. The ability to use odd modes such as low-resolution is ideal for younger children who are not used to dealing with tiny lettering – a bonus because it doubles as an education tool too.

Working with *Final Writer* is a dream provided you have a decent monitor – although a television would do at a pinch. The screen fonts are rendered directly by the outline engine and don't look as good as true screen bitmaps on a low-resolution display. This version establishes *Final Writer*'s position as

WORD FROM THE DEVELOPERS

You can buy an Amiga with 256-colour, high-resolution graphics, a fast 32-bit processor and a multi-tasking operating system for under £300 – but you still can't buy a Microsoft product to drive it. Here is what some of the most innovative Amiga developers had to say about the current state of the software market.

COMPANY: SOFTWOOD

Most successful products: *Final Copy, Pen Pal.*

Woody Williams is an ex-Macintosh programmer who started Softwood from his Arizona home. His first product, and indeed one of the first true Amiga productivity packages, was *MI Amiga File*, a name later changed to *Softwood File* after Commodore protested. It lives on today as *InfoFile*, from The Disk Company.

Given his previous experience, how does he see the Amiga as a development platform?

"From day one, the machine, the operating system and the hardware have been first rate. I think that's what's carried the machine through despite the lack of marketing and lack of good software. I still see the hardware as remaining top-notch in the future. Commodore engineers are first rate and will continue to be that way.

"The question is, will the marketing at Commodore and the software that's on the machine get better? From my standpoint I'm doing everything that I can with the software – and that takes time."

Williams goes on to compare Apple's success to the Amiga's near-failure, citing software as a major reason:

"When the Mac came out you had *Multiplan* and Microsoft *Chart* (made by an already-established company). Whereas when the Amiga came out, you didn't have any big guns firing off software products. If Commodore can get focused on the marketing and find a true niche – I don't care if it's the CD32 or the A1200 – I think the Amiga can survive."

As an aside, Williams makes reference to Microsoft as software buyers. Considering Microsoft do not actually produce anything for the machine he felt it was interesting to note that: "We recently had an order [for *Final Writer*] from Microsoft in Canada!"

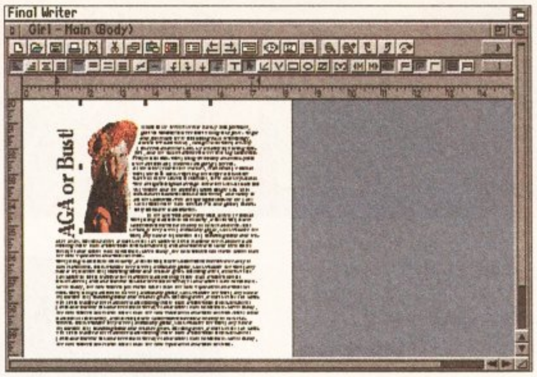
COMPANY: GOLD DISK

Most successful products: *Pro Page, Pro Draw.*

I caught up with Keith Hughes, Vice President of International Marketing at Gold Disk, as he was washing up the aftermath of his family's Thanksgiving dinner. It seems he has lost some

a premier word processor intended for the discerning professional user, although a selection of screen bitmap fonts would have been beneficial.

The real difference between *Final Writer* and anything previously released is the user interface – it looks amazingly similar to Microsoft *Word*. Across the top of each document is a strip of 3D bas-relief icons – called a button strip. This gives fully-customisable, non-menu access to any of over 170 control functions. Below that is the by-now-familiar set of document controls for justification, tabs, hyphenation and so on.



The screen preview at 25% full size is impressive and you can even edit at this minuscule scale – provided that both your monitor and eyesight are up to it.

The tedious cyclic gadgets, standard in Workbench 2, have been replaced by pop-up button menus. So instead of having to click between a number of options, the pop-up calls a menu of all the available items. The idea is a brazen copy from the Macintosh (or was that Windows?) and it works brilliantly.

WORD PROCESSING

Final Writer is more of a document processor than a word processor. As such, the lack of screen bitmapped fonts will be troublesome for people with lower quality monitors, unless they set a larger font size for the production of text and flow the real size into the final document. Although this is not convenient, it is not much of a problem in reality. Other options are to set the screen resolution to a larger value or edit the document at higher magnification. These options have the advantage that text flow is correct, but only part of the page can be seen at any time.

Editing facilities are fast and impressive, mainly thanks to the speed of the NimbusQ font engine – including a real-time live scroll. Blocks of text can be selected by dragging, and single words by a double-click. It would have been nice to select entire sentences and paragraphs by multiple clicks, however. Moving around the document is similarly fast using keyboard/cursor shortcuts. Interestingly, the sentence/paragraph jump is indicated by changing the mouse pointer when **<Alt>** is pressed.

These days any decent word processor offers a spelling checker and a thesaurus, and these areas are where *Final Writer* really shines. The spelling checker consists of the Proximity/Collins linguabase and apart from being fast and accurate it can be configured to catch other typos such as repeated words (the the) and mixed capitals (ThE) too. Memory usage is also adjustable so you can decide if you need speed at the expense of memory or vice-versa.

One omission (not a big one) is the ability to globally correct a common misspelling or ignore a special word. For instance, imagine you were spell-checking a document aimed for an American audience and wanted to spell colour as "color" – *Final Writer*'s spelling checker will flag you every single time the American spelling is encountered. Of course, "Search and Replace" can be used – but you have to find the misspellings first.

Similarly, the thesaurus is a true star, with over 43,000 head words. Unlike many word processors which just give the word and a list of possible alternatives, *Final Writer* gives the grammatical variation(s), a short definition of each plus the possible synonyms, as well as relevant or related words, contrasted words and antonyms. The adjective "Final" for instance is defined thus:

1) Adj., following all relevant others (as in time, order or importance).
Synonyms: Last, Closing, Concluding, Eventual, Hindmost, Lag, Latest, Latter, Terminal, Terminate, Ultimate.

This is presented together with a whole load of other alternatives too numerous (manifold, multitudinous, multifarious) to mention here.



Text will flow just as well around the irregular contours of a graphics image when columns have been applied.

The program starts to come into its own when used as a document-layout system. In theory at least, the facilities offered should allow anyone to create anything from a simple two-colour flyer to a complete book with full-colour artwork. It's fair to say the same is true of other word processors such as *Wordworth* and *Final Copy*, but they have never made it this easy. Many users will find this system far easier to use, and therefore more productive, than a real desktop publishing application like *Pro Page* or *Pagestream*.

DOCUMENT SETUP

By default, the program is set up for the most common Amiga-printer configuration. However, adventurous souls are given full control of the document whether it is a single-page, single-sided report or a multiple-page, bound volume. Most of this is accessed through a single requester which determines paper size (A4, B5 and so on), orientation (portrait or landscape), page numbering and much more. Interestingly, it is also possible to set the page guides to the printable area of a given printer. The top and bottom margins for cut sheet are different to that of fanfold (tractor) paper for instance.

Multiple-page documents are made easy with master pages. In essence these are single right- or left-hand pages containing all the common elements – headers, footers, graphics and so on. It means you can preserve the look of a document and even make sweeping changes simply by designing and maintaining a single page (or spread).

continued on page 24

faith in Commodore and the machine itself. He had this to say about the machine's (originally) advanced operating system and excellent graphics:

"The sad thing from my perspective is that the Amiga is no longer unique in those features. Commodore have been unable to successfully position their machine. It wasn't sold as a computer, it was sold as a games system."

Certainly, the Amiga started life as a games system, but a few were quick to recognise its potential as a business system. Developers bursting with innovation flocked to the new machine. Gold Disk, for example, were the first company in the world to introduce four-colour page separations before the heavyweights – like Quark, Aldus or Ventura – did on other platforms.

And what about scalable fonts, surely the Macintosh got there first? Nope. Gold Disk brought innovative technology to a budding market by incorporating Agfa's Compugraphic font engine way back in 1987 – long before Adobe introduced *ATM (Adobe Type Manager*, a raster image processor for PostScript fonts) for the Mac.

In spite of this, professional Amiga software still doesn't sell in the mass market. Is the software technology bad or are developers abandoning the Amiga wholesale for pastures new? Hughes echoes a common story:

"Companies like Gold Disk have struggled to survive, simply because our products are geared towards the serious, more professional user: the graphics illustrator, the people producing desktop published documents, people that want power spreadsheets, people with money to spend on video equipment.

"With a few exceptions, most of the people with Amigas are not interested in the sort of products we've got. When we saw Commodore ignoring the market we thought they could be addressing, we started to cover our backs a bit.

"*Professional Draw* [for Windows] is one of our best-selling products in the UK. It is the best drawing program under Windows, knocking spots off Adobe's *Illustrator* on the PC platform. The development team is a completely different group of programmers and one of the features we are hoping to put into version two is the ability to import Amiga files. We couldn't put it in version one because it was really difficult to reverse engineer it."

Though a self-confessed Amiga fanatic, he continues to sound the machine's death knell:

"We could take a lot more risks with the PC product because the market potential was there to support it. We needed the Amiga 4000 and AGA four years ago and we needed the likes of Microsoft to adopt it as a development machine."



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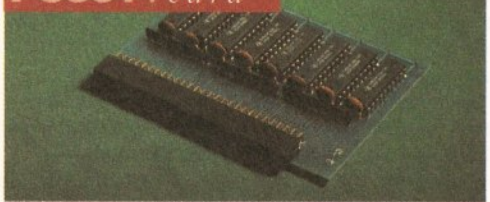
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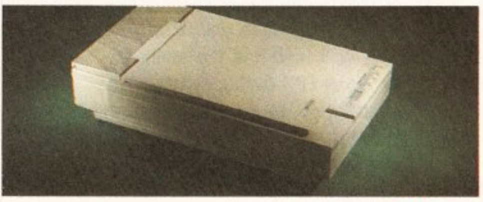
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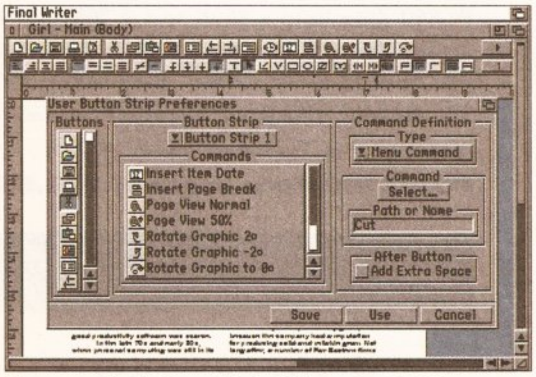
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continued from page 21

Another new and incredibly useful feature is multiple, named sections – each one with its own master pages. These are useful for formatting chapters in a book or for different parts of the same publication. Each can have its own attributes for page numbers, page number prefix (for appendices), editable area, and up to six columns with a customisable gutter width.

Nine sections are already defined: title page, outline, preface, table of contents, list of illustrations, main (the body of a single document), endnotes, bibliography and index. The settings for any of these are fully adjustable.

There's more to these than meets the eye. Softwood could have just included pre-defined sections and left it at that – instead they have incorporated facilities to generate each automatically. Having to work out your own contents and index can be a particular bind (especially on a large document) and just imagine the complications if you had to change a single page early in the document! Once the program has generated the section it is magically displayed on screen ready to edit.



The versatile button strip is fully customisable – even this detailed screenshot does not really do it justice.

Generating the table of contents is a matter of style. It is generally accepted that in a long publication (such as a book or report) a chapter, sub-section or paragraph begins with a heading of some sort, and this is usually picked out in a specific style, be it bold, italics, larger font size, and so on. If you are using *Final Writer* you can define up to eight styles which can also be used to generate entries for your contents page. When you want to generate your contents the program locates these defined styles in the main text and they, and their accompanying paragraphs, are automatically inserted in your contents page – together with the page number.

Index generation, at the other end of your book, is achieved differently. Index entries are typically words or phrases in the body of some text and *Final Writer* allows you a very fine degree of control on several levels. You can insert the word at the cursor, the current selection (as a group of words or a single phrase) or even add entries manually without having to look through the text. The rest is automatic and the program can even add letter headings at the start of each automatically sorted entry.

Students and professionals working with study reports will find the automated creation of bibliography and endnotes a great bonus. The only real difference between these two is that endnotes place a numbered marker in the text whereas bibliography entries do not. The relevant text is entered in a special purpose requester and stored until needed.

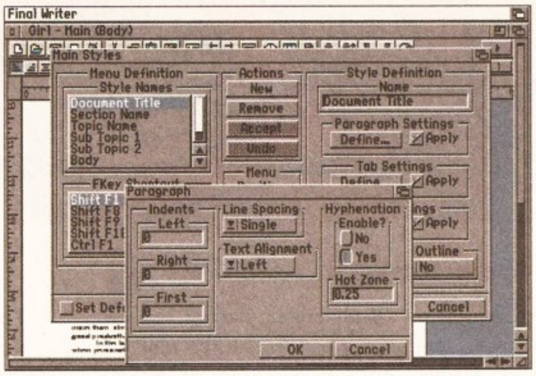
Unfortunately there is no facility for generating footnotes, however, and this is definitely on my wish list for the next upgrade.

DOCUMENT LAYOUT

Basic font changes can be achieved in much the same way as in *Final Copy*. Simply select the block of text to be affected and apply a font and attributes to it. Fonts are loaded through a simple requester that still lacks a preview feature. Considering *Final Writer* is supplied with 125 fonts – with the option to add more – omitting a font preview must be a major oversight.

The fonts are stored in drawers, some available directly, others grouped in drawers according to type: serif, sans serif and decorative. So, locating the one you want is quick and easy. In truth the number of fonts quoted, although typographically accurate, can be misleading. Each of the serif and sans serif faces are supplied in four styles: Roman (normal), italic, bold and bold italic, so the designs account for just 26 different faces; plus the 21 decorative fonts – including ornaments.

Even though the manual is vague on the subject, *Final Writer* also supports Compugraphic and PostScript Type 1 fonts. Compatible fonts can be had cheaply and there are thousands in the public domain as well as commercially available. Interestingly, the Compugraphic font support is not as advanced as that for NimbusQ – although the text can be sized, it cannot be rotated within a text frame.



Defining and applying styles with Final Writer's handy menus makes document processing a genuine delight.

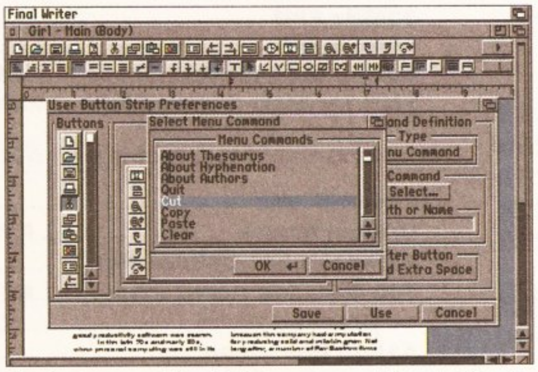
More complex typographic effects can be achieved using style sheets. These were sadly missing in *Final Copy* and it is nice to find them here. Style sheets define any number of settings – font, leading, type size, style and so on – to an entire paragraph. Each style sheet is given a unique name indicating what it does – headline, sub-heading, body copy and so forth – and up to 30 can be given a keyboard short-cut. It seems a shame, though, that style sheets and font selection cannot be selected from the button bar.

Advanced users will miss the ability to base a new style on an existing one. This is possible, after a fashion, by selecting an existing style from the menu and editing it, but the new style is unique. That is, if any changes are made to one style, they will not affect any others based on it. Although this may seem outlandishly confusing, it is very common practice with more advanced systems.

A few other things seem to be missing around here too. In particular, options to keep lines or paragraphs together (to stop uneven breaks over pages) and "widow and orphan" control. Although these items are alien to most word processors they should be available to anyone working with complex, multi-column documents.

GRAPHICS

The Amiga is probably best known for its graphics capabilities. Any Amiga document processor must, therefore, be able to handle graphics to some degree. Softwood's *Pen Pal* was the first Amiga document processor to handle 4,096-colour HAM graphics and although things did not change radically in *Final Copy*, *Final Writer* does include some major changes.



Customise away! Assigning a command to a button is a simple matter of selecting it from a scrolling list.

Although the program still supports IFF files and is fully AGA-aware, it also has the ability to process EPS (Encapsulated PostScript) images. EPS is a much more popular format for clip art since it is easily scalable and is, naturally enough, compatible with PostScript printers. Take a document to a typesetting bureau, mention IFF, and most will give you a blank stare or at best charge extra for conversion to a format their machines can read (like EPS). In the current version *Final Writer* can scale IFF and EPS images but cannot rotate them to an arbitrary angle. Also the famous text runaround is not available for EPS.

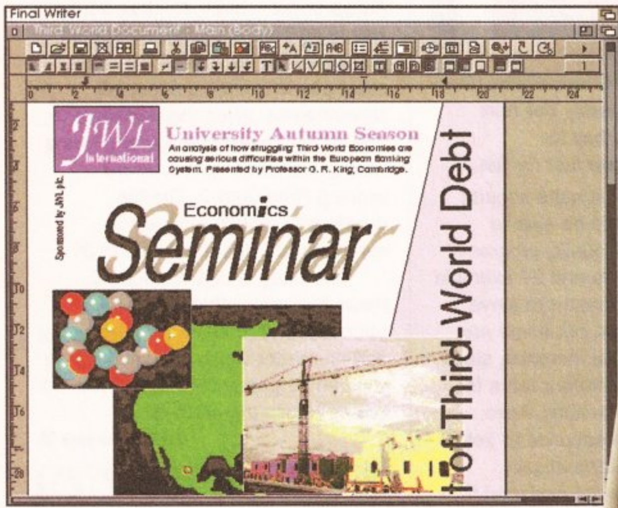
A feature present in *Pen Pal* and missing from *Final Copy* is the ability to draw simple object primitives such as boxes, lines and circles. This has been reinstated in *Final Writer* by popular demand and improved into the bargain.

Two line tools are directly available from the toolbar – orthogonal (horizontal and vertical) and freehand. Once a line is created it can be given a weight from hairline to one point in half-point intervals and from two to 12 points in two point intervals. User-defined and preset named colours can also be applied for colour documents. Oddly enough, although the line can have a title (in the list of illustrations) it is not possible to add arrowheads or change its style, which does seem to be a bit of a shame.

Boxes and circles offer similar options with the addition that they can also have a coloured border. Additionally, any number of objects can be grouped and moved, resized or rotated together. It is not possible to make global colour or other attribute changes to a group or create a frame around one, though.

Text can be contour-flowed around any graphic object at a preset distance, and it can be precisely positioned at any point in the document (including a page number) using a co-ordinate system. Thankfully, the runaround does work correctly for multi-column pages; text will flow correctly around an oval positioned centrally over three

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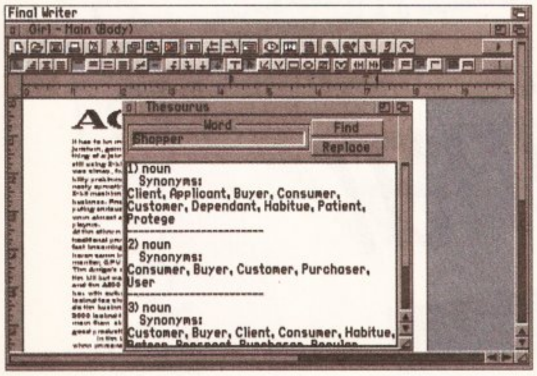
columns. A transparent mode allows objects to sit over the text, but it is not possible to automatically run text around the inside of something – a circle for instance. A polygon drawing mode would be a good idea in a future version.

On the down side, it is still not possible to anchor a graphic inside a portion of text – in other words, to achieve a situation so that when text moves between columns or crosses pages, the graphic flows with it.

FONT ENGINE

Final Writer uses the NimbusQ font engine developed by an ex-Commodore employee and, unlike the dreadful Compugraphic system employed by Workbench, it's very fast. It's so efficient that the document can be edited at any of the available magnifications – from 25 to 400 per cent. Unlike most systems text is not "greeked" (meaning "not rendered") at low magnifications.

I have already mentioned that *Final Writer* can rotate an object to a

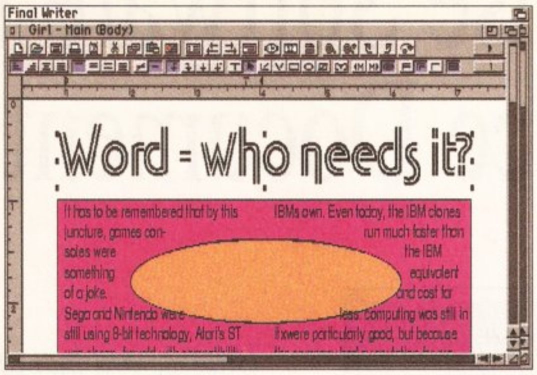


The thesaurus is powerful, a dream to use, and great for browsing through if you're stuck for inspiration.

desired angle (with a step of one degree – quite sufficient for most purposes) and this includes text too. Text rotation is specialised, but very handy – it is refreshing to see it incorporated in such a low-cost system. The idea is based on simple text frames, which are able to hold up to 37 characters.

Frames can be copied from the text (using a selected area) or defined from scratch. Settings within the frame are limited to font, size, leading and oblique percentage. However, once defined the frame can be set to any size (with a corresponding change in the font size) and rotated to the desired angle.

Frames are treated as graphic objects and can be freely positioned anywhere on the page, as well as grouped with other frames or graphic objects. Although simple, the system is not perfect and it is not possible to size and rotate the frame at the same time. In addition, text cannot be edited in the frame directly – that has to be done in the requester. Unlike the graphic primitives, text frames cannot have borders or background colours. This can be achieved by adding extra boxes, but it is a little fiddly.



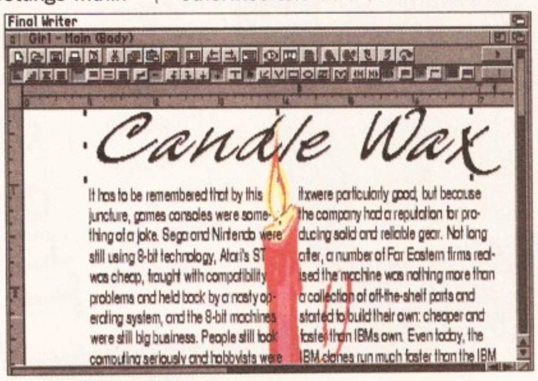
The ellipse primitive is starting to overlay the text here, showing that even Final Writer has its limitations. (The grotesque colours are just for fun.)

ADVANCED TOOLS

Clearly, *Final Writer* caters for a variety of users from the beginner (who wants to write a simple letter) to the expert. Unlike some systems though, it has the expandability to advance with an individual as their experience grows.

In particular, beginners will find the button bar convenient and powerful. However, the number of shortcuts is limited to the width of the window: about 25 buttons in high-res. The program has a lot more commands though – any of which can be assigned to a button – and to get around this it is possible to define up to eight separate button strips, which gives 400 possible buttons in all. It's a pity there is no way to design new buttons though.

Each can activate a menu item, run an ARexx macro, do a string command or insert a "text clip" – a *Final Writer* document. The manual is unclear about the string commands, probably the only drawback in the otherwise tolerable documentation.



The candle image is a colour EPS placed behind the text and the headline was stretched and scaled automatically to fit the required space. Macintosh Quark XPress cost me over £700 and it can't do that!

ARexx support is quite superb; just what you should be able to expect from a high-quality program with 175 commands and 27 example macros. Many are meant to serve simply as examples, but some are genuinely useful. For instance, since *Final Writer* uses different fonts for bold, italic and bold+italic, Arexx macros have been supplied to select the correct style automatically. Because these can be assigned to buttons, the whole process can be made simple and straightforward.

PRINTING

When it comes to the final printed output, Softwood have once again pushed back the boundaries of Amiga document processing. Just like in *Final Copy*, the NimbusQ fonts are crisp and sharp on any graphics printer – far better than any standard bitmap even when they've been rotated.

More importantly, it can output PostScript fonts and EPS images to any printer too. This means you can proof the document on a clunky old FX-80 and then take a PostScript file down to a local printer for output in full colour at 4,000 dpi. And of course, if you have a PostScript laser printer, *Final Writer* will use that too. PostScript options include downloadable fonts, adjustable halftones, crop marks and even tiny little thumbnails.

Mail-merging is a feature you could reasonably expect from any word processor worth its salt and *Final Writer* is no exception. Unlike *Pen Pal* it does not have an integral database and this is something I would like to see reintroduced. In its current state you have to create the merge data in either a database and save it as a comma- or tab-delimited file (CDF or TDF); or alternatively produce the whole thing manually. The data file can be produced in *Final Writer* itself and sorted using its internal sort function.

Once the ASCII data file and form letter have been produced, the program will extract the fields and data automatically. The function is something of a compromise between ease of use and program size, but it works well enough to suit most basic requirements. It is not possible to include calculations in the merge, however, and this would be a useful potential improvement.

CONCLUSION

Final Writer is the closest thing to *Microsoft Word* to appear on the Amiga so far – but it still has a long way to go before it could reasonably compete with the one of the world's most powerful word processors. Nevertheless, given the comparative size of the development team, it is a worthy successor to the award winning *Final Copy* 2. The big question is though, how will it compare to Digita's *Wordworth* 3?

One thing is certain though, these two are pushing back the boundaries of Amiga word processing and no matter which one you choose you can be guaranteed power without having to pay the earth for it.

continued on page 28

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Simple to learn and easy to operate.

Output
●●●●●●●●●●
Fantastic – just what you could expect from the sequel to *Final Copy*.

Performance
●●●●●●●●○○
Very fast across the board and quite workable on the 68000 machines.

Documentation
●●●●●●●○○○
Slightly under par overall. More tutorials would be helpful.

Facilities
●●●●●●○○○○
Not as many as its main competitor, but a wide range for many jobs.

Value for Money
●●●●●●●●○○
A professional price for a product. You get a lot for the money too and it would cost more on other platforms.

Overall rating
●●●●●●●●●○
If *Wordworth* 3 had not been just around the corner, *Final Writer* would certainly be the one for everyone. I'm waiting with keen anticipation, but this is the best yet by far.

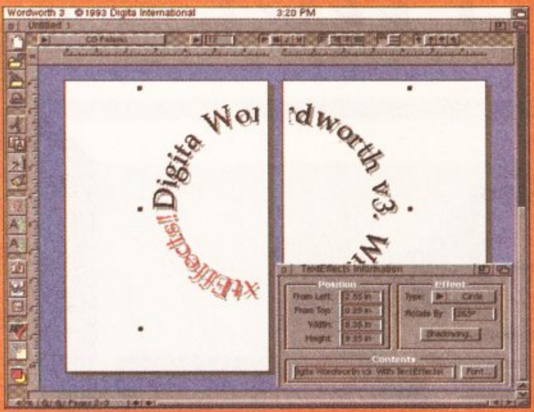
continued from page 26

PREVIEW: WORDWORTH 3

Hot on the heels of *Final Writer* is *Wordworth* 3, with an expected release date some time in January 1994. Once again, Digita have pushed back the boundaries of word processing and are about to redefine the way we think about what a word processor should be. *Wordworth* 3 is not a simple upgrade to the original program, it's a complete reworking and (like *Final Writer*) is finally leaving its Workbench 1.3 roots behind. *Wordworth* 3 will require at least 2Mb RAM, two disk drives and Workbench 2. All the features of the original program are still there – with sizeable improvements in many areas and more facilities into the bargain.

The most radical visual change for the new version is a complete overhaul of the front end. Although there is no doubt the original system employed by *Wordworth* 2 was clear and easy to use, it retained much of the look and feel of Workbench 1.3. *Wordworth* 3 conforms entirely to the Workbench 3 style guidelines and is the closest thing yet to a Macintosh application running on an Amiga. Out go the gross Workbench greys and in come highlights and lowlights. Digita have honed the 3D bas-relief so well, it's almost like a Sun Sparcstation.

Like *Final Writer*, *Wordworth* 3 borrows a lot of ideas from the Macintosh and *Windows* platforms. Editable, pop-up gadgets replace the dreaded cyclic gadgets, so requesters are clear, slick and easy to use.



From what we've seen of it so far, Wordworth 3 looks awesome! This circular text path is slotted over a two-page spread. "You know who" will choke on this one.

MORE PRODUCTIVE

More importantly, and a real breakthrough for Digita, are "modeless" object requesters. Such requesters can be left on the screen while you work with the program rather than being called up as needed. The term "modeless" comes from the idea that, unlike when a normal requester is being presented, the program doesn't come to a standstill until the request is fulfilled. This might not seem much of a benefit, but once you've used them you appreciate how much these ready-when-you-want-them items can increase your productivity.

The old toolbox has gone, to be replaced by a new toolbar – as found in later versions of *Microsoft Word*. Unlike *Word* for the Mac and PC though, the toolbar can also be positioned anywhere on the screen. Also, for users working on televisions rather than monitors and those with impaired vision, *Wordworth* 3 has two versions of the toolbar buttons: standard and double magnification for extra clarity. Tabs have been removed from the toolbar and placed in their correct position – in the ruler above the text. Font and font size can also be selected from here.

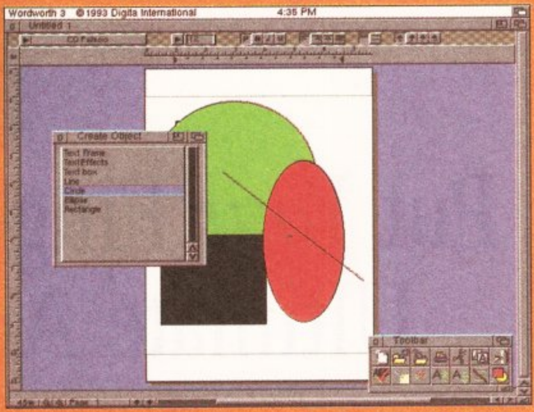
Another new facility, unashamedly grabbed from *Word*, is "Tables". If you've ever tried to set up a table of items using tabs (a feature comparison perhaps, or a menu) you're going to love this. Tabs are probably the only thing a modern word processor has in common with the manual typewriter and they're a bind. Tables get around this by providing a user-defined cell grid, rather like a spreadsheet, where each cell can contain some text.

Table support has been likened to *Word* and Digita claim that the size of each cell can be varied (unlike tabs, text can wrap around inside a cell) with full support for borders. Interestingly enough, although this facility is offered by *Word*, it is not available in top-end DTP systems – including *QuarkXPress*. Like *Word*, *Wordworth* will also be able to perform simple calculations such as sum, minimum, maximum and average. Very handy to have if you want a word processor that can produce anything from job quotes to restaurant menus.

WILD AND WONDERFUL

It is strange to see how some really silly widgets seem to take the world by storm. Two typical ideas that fit nicely into this category are "drag and drop" text editing and automatic type correction. They both sound great, but may be of little practical use – to the extent they can be a real hindrance.

Automatic type correction first appeared as a Shareware PC offering called *Mindreader*. The idea is to scan keyboard entry for certain words and replace them with other words or phrases. For example, you could set it



Now we're getting a bit more down to earth, with Wordworth's basic (and useful) graphics primitives.

The way ahead

Will all this new software require much more new hardware? Mark Smiddy spoke to Amiga designer, Chris Ludwig, for the latest on future developments.

What better way to get to the heart of Commodore, than to speak to one of the developers? Chris Ludwig from Commodore America is one of the design team working under Lou Eggebrecht – I caught up with him while he was finalising some details of the CD32's FMV cartridge. Although this might still sound like a entertainment system, FMV will be a critical addition to multi-media as we know it and is probably the most understated development yet to grace the computer scene.

We have been told that full-motion video is a simple add-on. How will it be fitted to the CD32?

FMV might be described as a module. You just take off a door at the back of the CD32 and slide the module in. What you have there is a chip called the CL450 whose job it is to de-compress data coming in at 150Kb per second and turn it into motion video. Another chip in the same module takes data at a lower rate and converts that into sound. The card then feeds back the video and audio, rather like a genlock would, straight into the Amiga.

So how many discs are going to be involved – for an average 100 minute film?

At the moment it'll most likely be two discs for a two hour film. Each holds about the same amount of video and audio as you'd normally get on CD audio: about 72 minutes per disc.

What sort of quality will we can we expect from these discs – say, compared to VHS?

Interestingly the quality of video has very much to do with the quality of the encoding. I think we'll soon see movies starting to look better than they actually do today. As the market starts to absorb these discs then we will see better encoding/decoding software. At the moment there are places where it looks better than VHS and others where VHS wins hands down. The ability to squeeze movies out of what used to be an audio medium is quite stunning.

On to graphics, Chris. Is there a danger of the same happening with FMV as it did with the vast range of incompatible graphics cards?

In the realm of video cards for the Amiga, it's sad that retargetable graphics has taken so long. The goal of us providing graphics hardware for the machine was such a lofty task that we couldn't have hoped to be ahead of everyone else out there as far as providing high-quality graphics for the Amiga was concerned.

We have been working with a couple of third-party developers to ensure the software for their MPEG cards for the A4000 is compatible

up so that when you typed "AS" and pressed spacebar, the words "Amiga Shopper" could be magically inserted in the text. Digita call their version of this facility "DigiSense: Thinking for you" and claim it will come with a small selection of common typos that will be corrected on the spot.

Then there's type transposition: "Teh" instead of "The" and common misspellings like "recieve" replaced by "receive" are two examples. Call me a cynic, but the idea of having a computer tell me how to type while I'm doing it is a little off-putting.

Drag and drop text editing is even stranger and is basically intended as an extension of cut and paste. With the conventional system you mark a selection of text, cut it out, move the cursor to the new position and hit paste to re-insert it. Drag and drop cuts out the middle man. With this system you mark the text, pick it up with the mouse and drop it in a new position. I've used this facility on *Microsoft Word* – and I just can't get it to work as well as good old cut and paste.

BEYOND COMPARE

Digita are also about to redefine the way we think about fonts – just as Softwood did with *Final Copy*'s NimbusQ engine. Unlike *Final Copy* and *Final Writer*, you will still be able to use screen fonts such as the standard Amiga fonts and the Workbench 2 Compugraphic engine. In addition you will also be able to take PostScript Type 1 and TrueType outline fonts from a PC and use them directly.

Graphics support has been greatly enhanced with some simple object-oriented graphics primitives like lines, boxes and ellipses. These can have any colour applied to them and there is a rumour that gradient fills may also be included.

Text frames have been added to handle some of the more complex typographic control, but it is not yet possible to join separate frames over many pages. This facility is currently only found in true DTP systems to flow stories over two or more pages.

What separates *Wordworth* 3 from *Final Writer* and might make it better even than *Microsoft Word* is what Digita call "text effects". These frames of text can be spun, flowed around paths, coloured and all kind of things. Such effects are invaluable for presentation documents where you need to make an impact quickly. There's actually no other conceivable need for them, but the fact that they're there further reduces the need to get a true DTP system.

As far as word processing and even page layout systems go, there is nothing on the Macintosh or the PC that even comes close. Certainly it is possible to achieve these effects on other platforms, but you'll need extra software (Adobe's *Illustrator* for example) to do it. Not only does such software cost a lot of money it's also difficult to use, and besides – you're going to need a powerful system to use it on. Microsoft may have rested on their laurels for too long – the British are coming and some large US corporations had better watch out.

JARGON BUSTING

586 – Intel's trademark for the latest and greatest of their 80x86 series of microcomputer CPUs. Intel chips have never had the power of their Motorola counterparts, but an Intel engine beats at the heart of every PC clone there is – making them the market force to beat.

ATM – *Adobe Type Manager*. A PostScript RIP and one of the most-used Macintosh and *Windows* extensions. Just about anyone using PostScript in their documents uses *ATM* to render the font image accurately on screen. *ATM* can also be used to render PostScript fonts to non-PostScript printers for proofing purposes. *Super ATM 3.6* for the Macintosh also includes font substitution – this allows a user to lay out a documents for someone else, even if they don't have the same typefaces. This is because *Super ATM* automatically replaces the font with a general purpose serif or sans-serif face and applies the original font's metrics (leading, kerning tables, width and so on).

EPS – Encapsulated PostScript. A specialised image format for PostScript devices. Like a PostScript font, an EPS contains a program which literally describes the image. Many EPS files also contain a screen "preview" image which can be used by software to display the picture for positioning purposes. If the preview image is not present, the picture has to be displayed by a PostScript RIP or at worst, displayed on a printer.

PostScript font – Each letter in a PostScript font is essentially a series of instructions describing how the character is to be drawn. This allows the font to be rotated, scaled, filled with different patterns or manipulated in any number of ways, without losing any detail.

PostScript – A programming language invented by Adobe primarily used for DTP. Although it is possible to write a PostScript program "by hand" it is more usual to have it generated by the software and written to a file or sent directly to the printer.

QuickTime – Apple's proprietary standard for motion video – supplied as a system extension with System 7.1 and also with certain third-party programs.

RIP – Raster Image Processor. A fancy name for a piece of software that converts a mathematical description of any image into a screen picture. This is usually applied to PostScript fonts and EPS files, but it doesn't have to be. See also **PostScript**.

TrueType – An outline font system devised by Apple for use on the Mac, intended to compete with PostScript. It can be rendered on-screen without requiring an extra RIP. *ATM* was already well established by the time TrueType appeared and while the technology has not died, it has not been the success Apple had been hoping for.

with ours, in much the same way as you can use other people's SCSI cards for the Amiga.

A traditional strength of the Amiga is high-quality graphics but that was when there was only a small handful of companies designing graphics chips. Now everyone and his brother is designing graphics cards for the PC and Macintosh and to think that we're going to be able to compete with all of them is unrealistic.

Is it true that the AAA chip set will have 3D texture mapping?
We are planning a software library whose job it is to redirect those sorts of things. That is the linchpin of a machine like a Silicon Graphics Workstation. It is a means of providing people with a set of calls they can make to give them 3D stuff and we can extend the functionality by things like that in hardware. We are working towards having 3D calls in the OS that will allow people to do 3D work quickly. From there it's a reasonable logical extension that we can throw in some hardware to assist that library.

It's something that we felt we needed ever since we saw the specifications for 3DO – it just makes sense. It's amazing how much time, money and energy gets thrown into coming up with better games. With a machine like 3DO, this seems to be the real goal.

We hear that the the new RISC machine will be five to ten times the speed of the Pentium. Is this true?
It's really difficult to say, we've only just begun to choose the chip. I'm fairly certain that we have decided on a particular chip, but a lot depends on the clock rate and a whole slew of other issues. We have talked about integrating portions of the graphics architecture into the chip and putting portions of OS in the chip rather than just running it in 68000 emulation mode. This will all determine how it will run, especially as a multiple of current Amiga systems.

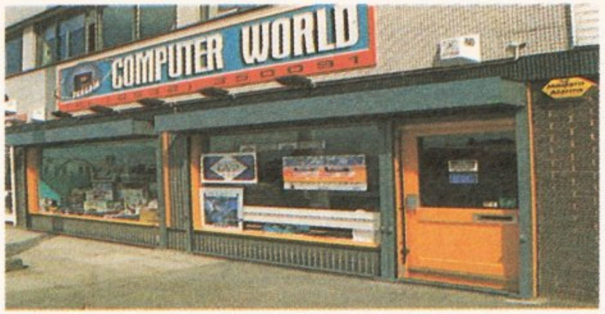
What does the near future hold for the A1200, then? There are rumours that you will reduce the AA set-up from three chips to two.
It's certainly something that we're talking about to a couple of chip manufacturers now. We'd like to see a 68030 and a significant portion of AA on a single wafer. This will increase the machine's throughput and help things like 3D graphics.

So will there be a low-end machine fitted with the forthcoming AAA chip set, or is that going to be held back for the high-end workstations?
I would say that there will have to be – that is the nature of Commodore. It's a formula that's worked with varying degrees of success for us along the way, but I think it's a good one. We can come up with a high-end machine that can be used in and out of house for software development and migrating the high-end technology down into low-end products where we can sell enough to actually make some money.

With AAA I can see that we will actually sell a large quantity of the high-end machines as well because the graphics architecture really is there to have high-quality graphics yet still be competitive on price with PCs and Macs. This is something we haven't quite got yet. I think AA comes close – but AAA is a killer.

Although it is not generally realised, Amiga developers seem to be among the most innovative around. How does this affect the market?
One of the cool things about being involved with the Amiga [as one competitor used to say] is "Power Without The Price". We've driven the whole market for 3D software down in price and up in quality. Products like *Real 3D, Lightwave* and the Video Toaster have set a precedent for the rest of the world. AS

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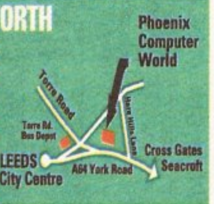
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Shedding more light on images

More from Wilf Rees on building better images, plus a look at educational game Time Flies.

A few months ago (*Amiga Shopper* 31) I explained the basics of creating images. This month I want to look a little deeper into the way you can use some of the more sophisticated features of *Dpaint* to enhance the finished image.

I have used a well-known landscape-generating package, *Vista*, to start off with, but then we'll move on and enhance the rendering by adding some selective fills and employing the 'transparency' and 'smoothing' options in *DPaint*.

I have used a landscape which gives us plenty of terrain, including a valley to which I have added a river, and chosen a viewpoint which enables us to look towards the distant sea. After rendering in the highest resolution, I have saved the image as an IFF file ready to import directly into *Dpaint*.



First use Vista to create our valley complete with river, then save it as an IFF file to import it into DPaint.

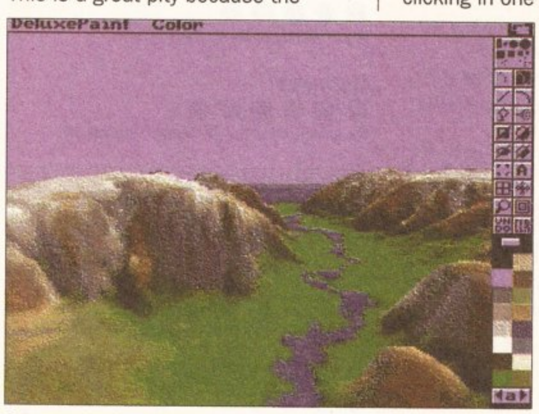
One of the disadvantages of *Vista* is the poor quality of water and sky it produces in the final image. This is a great pity because the quality of terrain is excellent. Here we have our image ported across to *Dpaint*, and it needs a little tweaking.

First, bear in mind we are working in HAM so there are going to be random pixels everywhere. Starting with the sky we need to draw a flat area of colour black, so using the 'brush' tool, grab an area of said colour and begin filling in the whole of the sky area. Leave a small margin where the sky meets the hills and horizon for detailed editing using the 'magnify' tool. Once the entire sky is black, we are ready to think about our intended colouring range.

DESIGNER SKIES

The next step involves opening the 'ranges' pull-down menu (keyboard short-cut: <Ctrl>+R). Now we must select the type and colour of sky we want – in this case we are going to fill the sky with a range generated from a pale grey, through to a turquoise blue. You could give the range a number of such changes if you wish, but remember – whatever you do to the sky must affect the colour of any water in the picture.

Select your chosen colours from those available in the existing menu or, if these are not suitable, open the colour mixing option from the pull-down menu (or <Ctrl>+P) and create your own. This can be done by clicking in one of the grey-hatched boxes and moving any of the three RGB sliders until your desired colour is achieved.



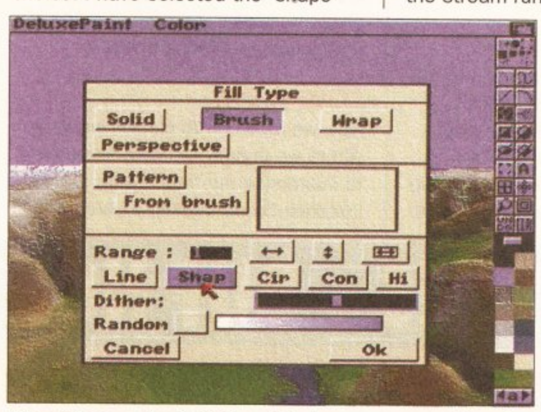
Now we're in DPaint. The perspective is fair enough, but the sky and water are less than convincing.

Once you have created a range, you move on to the 'fill' tool. Now by clicking with the right-hand mouse button you will load the requested window. This is one of the best features of *Dpaint*, and if you are not completely familiar with it, now is a good time to learn. 'Solid', 'brush' or 'wrap' will determine the type of fill you generate. Solid simply gives you a block of colour determined by that selected, but clicking on 'brush' will bring the range you have selected into play.



All the extraneous HAM pixels first have to be removed by painting the sky black, as shown here.

How this is applied as a fill can be determined by different options along the centre of the options box. I suggest you try any of the 'line', 'shape', 'circle', 'concentric' or 'highlight' options to see the different results, before making your choice. I have selected the 'shape' option, but you may wish to create a different effect, perhaps to emphasise a sunny or moonlit scene.



Here I have selected 'shape' but you can experiment with 'line', 'circle', 'concentric' or 'highlight'.

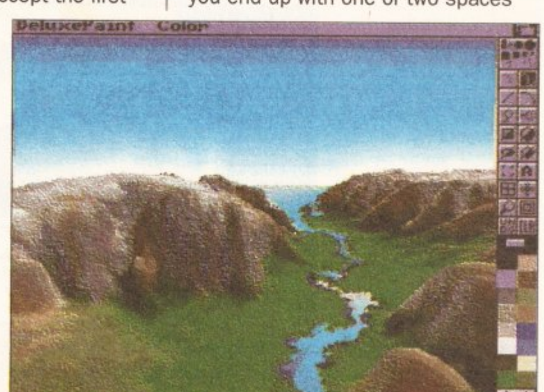
Once you go to fill in the space, it's important not to accept the first option because each of the special fills offers a line to identify the point of emphasis or colour convergence. Again, try lots of different points until you get the result you want.

If the fill is opposite to the desired direction, go back to the 'range' menu and you will find a 'reverse' tool next to the row of colours. Simply clicking on this will turn the whole range around the opposite way.

REFLECTING STREAMS

Now that we have completed the sky, the stream running through the valley needs the same kind of treatment. Again there is an abundance of HAM-generated pixels, so these need wiping out with black. Exactly the same process as for the sky applies.

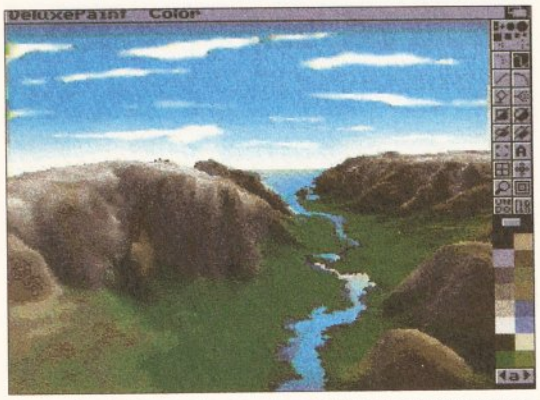
You might try reversing the colour range to reflect the overhead colours. Sometimes this works, but it can also look a bit like a cartoon. Once more, don't settle for the first position of the fill, try assorted positions of the line selector until you get a fill you like. If you end up with one or two spaces



This is more like it. The sky and river have both been filled with a range from pale grey to turquoise.

unfilled, just go back and fill them separately – you'll be surprised at how effective this can be. Finally move to the 'smooth' option (<F8>), select a small brush tool from the built-in brushes and blend the fill in the distance. Give the same treatment to any irregular pixellations caused by the odd behaviour of HAM in the sky region.

We now have to try to make the sky look more realistic. It is important to look at pictures of real cloud formations first, otherwise you will end up with daft-looking balls of fluff. A good source is newspaper colour supplements. In my example I have gone for some cirrus clouds, which are relatively easy.



Copy cloud shapes from real ones if you want them to be convincing – colour supplements are a good source.

CLOUD BASE

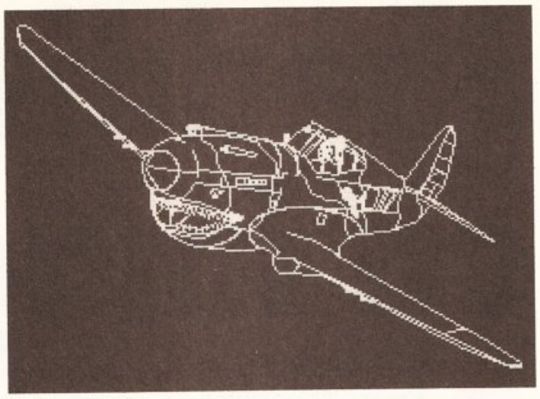
To create clouds like these, go to the continuous freehand tool in the toolbox menu and click in the box with the right-hand mouse button. A small, filled shape should appear. Go next to the colour menu and select a colour as near as possible to white. Draw some long, irregularly-shaped horizontal forms which should be larger in the foreground, and never in rows one above the other. Complete them as white shapes.

Once again we use the 'smooth' option (<F8>) and carefully move over the clouds blending the sharp edges into the blue of the sky. As the clouds recede into the distance, give them more treatment to represent the effect of colour perspective, and always keep the mouse moving as you carry out the smoothing. Don't get carried away and end up smoothing everything to the point of blurred vision, and avoid the junction of sky and mountains – this needs to be particularly sharp.

Finally choose 'blend' (<F6>). This is one of the unique occasions where you can use the idiosyncrasies of HAM to your advantage. Move along the bottom of your cloud formations with a small brush from the built-in brushes. This will cause darker pixels to appear on the underside of the clouds simulating shadow.

LOW FLYER

Now we move on to picture creation, where we import, or draw, something to customise our final result. In this instance I have chosen a piece of clip-art of an American fighter aircraft. This comes only as a line drawing so, having saved my current image on my *Vista* rendering, I load the plane. If you have sufficient memory it can go on to the spare screen and be worked on there. Alternatively you can even load *Dpaint* twice – wonderful this multi-tasking!



Here is the original clip art of the American fighter. Not promising at this stage but okay when it's been filled.

If you have rendered the aircraft on the spare screen, grab it as a brush and flick back to the main screen (J). You can now begin reducing or enlarging your image (with the + or - keys) until you are happy with the object's size and position. Stamp the brush home, and you are ready for the final touches.

All that remains now is to make the imported image 'belong' to the scene created. Here I have used the 'transparency' feature (<Alt>+T) to add several effects. The propeller effect was done using the 'ellipse' tool plus highlights. Along the base of the aircraft, and along the upper edges, I have added further highlights using lines of a darker and lighter tone, to emphasise reflection of the sky. Notice also the reflection in the river below, again done with the 'transparency' effect.

As you can see, once you've grasped the basics – as outline in my first article on making pictures on the Amiga – the secret is attention to detail – that little extra effort is always worthwhile. AS

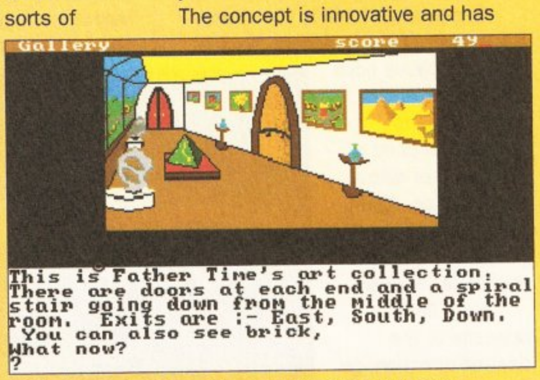


Using the 'transparency' function we can import our fighter and make sure it fits in with rest of the lighting.

TIME FLIES – BUT NOT THROUGH EXCITEMENT

I have come across a lot of software designed to help children solve the mysteries of telling the time. In this offering from Coombe Valley Software, the writers have approached the task by making the whole process part of an adventure game, offering you all sorts of objects to collect, as you wander around taking the 'watch dog' for a walk. 'Time flies' (the buzzing variety) appear every so often to demand an object from the collection you've acquired on your travels through a maze of rooms and gardens. However, instead of giving up one of your precious objects you can answer a time-related question instead. The difficulty of these can be set at the beginning of the programme.

Like all adventure games there are the usual command words, and you can call an inventory at any time. The concept is innovative and has the potential to be translated into a really worthwhile educational game. Sadly, this isn't it.



Unfortunately this is the quality of the screens throughout this package. Time Flies does nothing to extend the performance of the Amiga, and looks more like some ancient, ported BBC B relic.

I found the whole package rather boring, as did the eight year old who did my sample testing for me. The graphics are uninteresting and the whole presentation looks like something ported from an old BBC B. This is not the quality of software we expect on the Amiga. It neither exploits the Amiga's capabilities nor approaches the educational principle in an exciting way.

SHOPPING LIST

Time Flies ....**£14.99 Boxed**
............................**£12.99 Unboxed**

From: Coombe Valley Software,
18 Nelson Close,
Teignmouth,
Devon TQ14 9NH.
☎ 0626 779695

CHECKOUT
TIME FLIES

Presentation
●●●○○○○○○○
Naff graphics and looks dated.

Use
●●●●●○○○○○
Reasonably easy to use.

Concept
●●●●●●○○○○
Excellent idea but it doesn't come off.

Educational Value
●●●●●○○○○○
Will help, given sufficient interest.

Value for Money
●●●●●○○○○○
It's cheap enough, but then it should be.

Overall rating
●●●●○○○○○○
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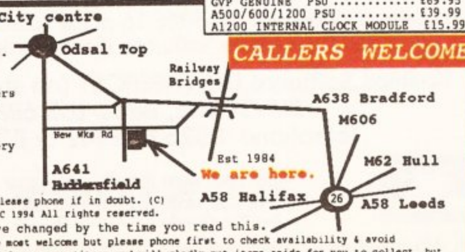
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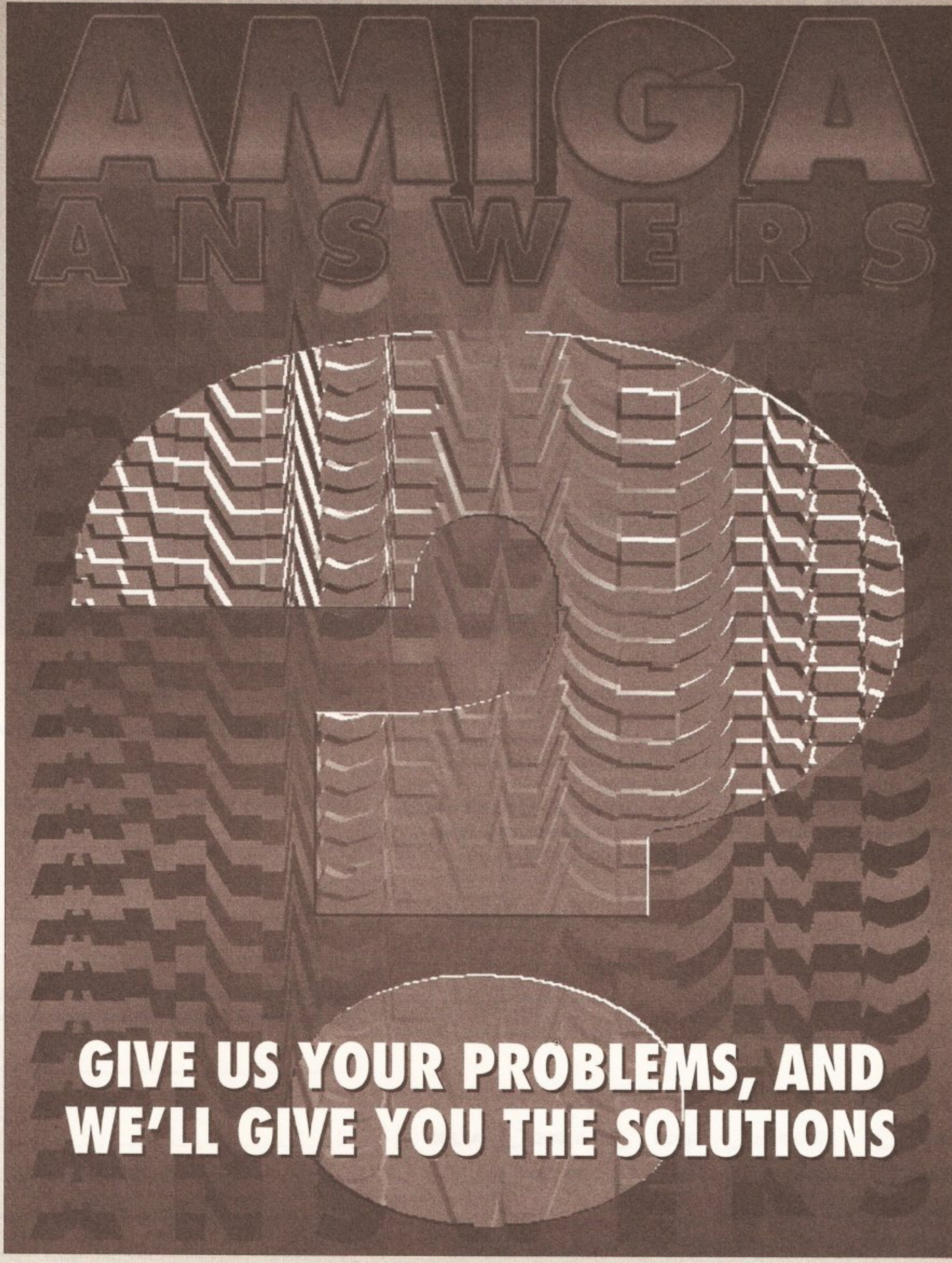


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CONTENTS AT-A-GLANCE



USING THE ICONS TO FIND WHAT A QUESTION'S ABOUT

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GENERAL This icon's for general Amiga-related queries or questions that don't fall under other headings.

DTP This is the icon you'll find next to queries related to the whole area of desktop publishing.

MONITORS Questions about monitors, including television display problems, will feature this icon.

HARDWARE This icon's for queries relating to general hardware, excluding kit covered by other headings.

BUYING This icon indicates a question asking for buying advice in any area, hardware or software.

PRINTERS If a query concerns printers, printer drivers and hardcopy problems, this is the icon you'll find.

CODING Questions about coding (no matter which language) will have this icon next to them.

VIDEO This one's for queries about using your Amiga with video hardware such as genlocks or digitisers.

MUSIC This icon is for questions about MIDI, sampling, synthesisers and music software.

SOFTWARE Queries about specific software packages or programs have this icon next to them.

COMMS If your question relates to comms, including modem problems, this is the icon we'll use.

NO PROBLEM!

Hello and welcome to our magazine within a magazine – the place where we endeavour to solve all of your Amiga-related problems. We'll deal with any sort of problem, no matter how trivial or complex, no matter what aspect of the Amiga it involves. We devote more space than any other magazine to this service, and we use icons extensively to make sure you can find your way around the pages as easily as possible, and find the solutions to the problems you have. Our use of jargon-busting boxes ensures that you'll be given explanations for any unfamiliar terms. We also try to put the problems in as wide a context as possible, so that their solutions will benefit not just the person who has written in, but all of you with related problems. So even if you haven't sent a problem in for answering, it's worth having a look through these pages to see if someone else has asked a similar question. The index on the previous page will give you a guide to the topics covered this month.

We draw on the services of a talented team of Amiga enthusiasts, all of whom are widely regarded as experts in their fields. **Mark Smiddy** is our AmigaDOS and floppy drive expert. **Jeff Walker** is our desktop publishing, fonts and printer correspondent. Then there's **Gary Whiteley**, an expert on video applications and graphics. **Jason Holborn** has mastered the intricacies of AMOS, and with his advice you'll be able to do likewise. Jason also has an encyclopedic knowledge of what's available in the PD world. If you have a query about comms then we'll set recent star of the small screen **Dave Winder** on the case. **Toby Simpson** is our expert code clinician. If you're experiencing problems with anything from C to assembler, try taxing his little grey cells instead. You'll find his special Code Clinic section – in which he removes the bugs from your programs – on page 46. **Wilf Rees** is a man with an education – well, an expert on educational software, at least. He's also got a jolly useful all-round knowledge of Amiga hardware and software. Last but by no means least is **Paul Overaa**, who will apply his intuition to any of your operating-system related programming problems.

So that's our batch of boffins – it's up to you to keep them busy. They thrive on your problems, so be sure to send them in. Remember, it doesn't matter how simple or complex they are – everyone has to start somewhere, so beginners shouldn't be afraid of asking for help, and even the most experienced Amiga user can get stuck occasionally. And if you've got any tips or hints to share with your fellow readers, then send them to us and you could soon be a tenner richer. Please mark the envelope "Tips" and send them to the Amiga Answers address specified on the form below.

Please don't include an SAE with your questions – we receive simply too much mail to be able to offer a personal reply service.

If you send in a question for the Amiga Answers experts, please fill in and include the form below (or a photocopy if you don't want to cut up your magazine). And please also make sure that you include all the relevant details – version numbers of software and so on – so that we have the best chance of helping you.

Send your form and question to: Amiga Answers, *Amiga Shopper*, 30 Monmouth Street, Bath, Avon BA1 2BW. Sorry, but we cannot reply personally to any questions – even if you include an SAE.

Name: ____________________

Address: ____________________

____

____

Your machine:

A500 ☐ **A500 Plus** ☐ **A600** ☐ **A1000** ☐ **A1200** ☐

A1500 ☐ **A2000** ☐ **A3000** ☐ **A4000** ☐

Approximate age of machine: __________

Kickstart version (displayed at the "insert Workbench" prompt)

1.2 ☐ **1.3** ☐ **2.x** ☐

Workbench revision (written on the Workbench disk)

1.2 ☐ **1.3** ☐ **1.3.2** ☐ **2.04/2.05** ☐ **2.1** ☐ **3.0** ☐

PCB revision (if known). Do not take your machine apart just to look for this! __________

Total memory fitted (see AVAIL in Shell for Workbench 1.3) __________

Chip memory available (see AVAIL in Shell) __________

Agnus chip (if known) __________

Extra drive #1 (3.5in/5.25in) as DF__: Manufacturer __________

Extra drive #2 (3.5in/5.25in) as DF__: Manufacturer __________

Hard disk: ____Mb as DH__: Manufacturer __________

Extra RAM fitted – type, size in Mb and manufacturer __________

Details of any other hardware which could help us to answer your question:

____

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Now, use this space to describe your problem, including as much relevant information as possible. Please continue on a separate sheet if necessary.

____

AS 34

FOG AT NEWBURY

I have a Newbury 8820 wide-carriage dot-matrix printer and can't find the correct driver to use it with my spreadsheet and database on my Amiga 500. The database in *Pen Pal* crashes whenever I try to print and the *Maxiplan* spreadsheet usually acknowledges that it is printing, but doesn't! The nearest I can get to a printout is from the shareware *QED* text editor, which uses a generic driver, but this translates each carriage return into a form feed so I get one line of text on each page.

The printer manufacturers have been helpful in configuring the dip switches but say that because the printer is fairly old they have no idea what driver would work on the Amiga. Can you help?
J M Porter
Moss Side
Lancs

If it doesn't work with the Amiga's generic printer driver, which (supposedly) strips out all printer control commands and merely passes the ASCII text, line feeds and carriage returns to the printer, then no other Amiga printer driver I know of will work. If the Newbury thinks a line feed or a carriage return is a form feed then it is weird indeed and needs a special driver written for it.

Why *Pen Pal* and *Maxiplan* are playing up I don't know – I suspect it's because the printer driver (selected in Workbench printer preferences) and the printer are having an argument. Printer driver keeps saying "Do this"; printer keeps saying "Shan't", until your Amiga says "If you can't play nicely, children, you can't play at all." ***JW***

OUTGROWN A500

I have an Amiga 500 fitted with a 42Mb hard drive (GVP), 1Mb Chip RAM and 4Mb of Fast RAM. I use it mainly for video work, including titling and animation, but I'm now running out of storage space on my hard disk. I'm also getting short on Chip memory, particularly when using software such as *Scala*.

What is the best method of upgrading to achieve more hard drive space? What would you recommend for expanding the Chip memory? Or is it better to buy a new computer and, if so, which one?
R A Thorne
Chearsley
Bucks

There are several solutions to your hard drive problems but as far as expanding the Chip RAM goes there are only two realistic routes. The first is to buy a Chip RAM expansion (I'd recommend the DKBMegAChip 500) which will set you back a fair old wodge. The second is to invest in a new Amiga, such as an A1200, or a even a second-hand Amiga 3000.

The trouble is your existing hard drive expansion will have to be either cannibalised for its drive or ditched altogether (if it isn't an IDE drive) if you go for the A1200 option, since A500 add-ons won't fit the A1200. So both your extra memory and your hard drive will become redundant.

However, there may be a simpler way. If you don't mind not having the new AGA graphics modes you could hang on to your A500, add the Chip RAM expansion and manage your hard drive more efficiently with the help of a compression program like *Imploder* (which is Freeware and available from PD libraries) or a commercial product like *PowerPacker*. I've used *Imploder* for several years and it often reduces the size of an executable (a program) by half. But it won't work on non-executable files such as text or images, which is why you'll also need a program like *LHA*.

LHA can compress images, text files and animations into much smaller files, though they have to be decompressed again before they can be used or viewed. But the advantage is that data files can be first *LHA*ed and then archived to floppy disk for permanent storage and reloaded when necessary, reducing the overhead on your hard disk. A commercial program like *Quarterback* will also come in handy for efficiently archiving files to disk.

You'll find that you can never have enough hard drive space, no matter how much you already have. Continual, often ruthless, file management is the key. If you've not used a program for a few months, back it up and clear it from the hard drive. Get rid of any clutter, compress what remains, back it up, and then re-assess the space left before thinking about buying a new drive.

Eventually you'll *have* to buy a bigger hard drive, of course, but did you realise that you could replace the one you currently have in your GVP expansion with a larger capacity drive? If it is of a suitable make and type you should be able to do the job yourself, but if you have any doubts contact a reputable dealer. ***GW***

C-ING THE LIGHT!

I am learning C++ as part of my computer studies course and wondered if there was a PD/Shareware version available for the Amiga. What about *GNU C/C++?*

Also, what books would you recommend – the *RKM* manuals, BSB's *Mastering Amiga C*, Compute's *Mapping the Amiga*? I've also heard of the *Native Developer Kit*. Would this help and would I still need to buy the Amiga include files?
George Hamilton
Edinburgh

GNU C/C++ is the only offering that I've heard of but I suspect you will have more than a few hassles if you follow this particular path. However, since it looks to be the only cheap Amiga-oriented C++ route available right now you might be tempted to try it anyway. You can get *GNU C/C++* from a number of PD libraries and PD Soft (☎ 0702 466933), for example, sell the three disk pack for £8.25.

For any serious Amiga programming the Addison Wesley *RKM* manuals are essential and the Bantam Book's *AmigaDOS* manual (now in its third edition) is also likely to prove useful. These provide the official Amiga technical reference material. If you are new to Amiga programming you may also need less-advanced tutorial books like the other two titles mentioned. It all depends on how much you already know about programming and the Amiga. Best get down to your local computer store or book shop and have a look at them before you buy!

Access to the official Amiga header and include files is essential for any serious Amiga programming. Contact the Developer Liaison Manager, Commodore Business Machines UK Ltd., Commodore House, The Switchback, Gardner Road, Maidenhead, Berks SL6 7XA to get hold of a copy of the *Native Developer Update* package along with additional documentation, and programming utilities (£25). ***POA***

PC COMPATIBLE?

I recently upgraded from an A500 to an A1500+ with the intention of fitting a Commodore 386 Bridgeboard. This would allow me to run *Turbo Pascal* and *C++* (required for my university course), but I was told by a dealer that Commodore have sold the rights to the Bridgeboard and it is no longer available. If this is the case, does this also apply to the Golden Gate 386 reviewed in *Amiga Shopper* 19? Have you any idea when Emplant 386 will be available and what, if anything will it offer over the Golden Gate? Finally, what memory expansion would you recommend for my system? I would like something that is compatible with the PC.
Peter Briggs
Blackpool
Lancashire

Golden Gate 386 is old hat (Vortex have progressed to a 486), and there's no information on a release date for Emplant. Commodore's own Bridgeboard has not gone completely, I believe they sold all stocks at low cost for inclusion in special packs.

However, there's more to this than meets the eye. An emulator is nothing more than its name suggests and it will never perform as well as the real thing. While Macintosh emulators still offer reasonable value for money, PC engines do not. Shop around: you'll be able to get the real thing, complete with hard disk, colour SVGA, two serial ports, a parallel port, Windows, MS-DOS and so on, for little more than a typical emulator would cost – without software! And it will be completely compatible. Big-box Amiga-PC emulators are, frankly, too costly to be worth the extra. Besides, having two machines is more convenient and you can use the PC to debug programs you write on the Amiga. ***MS***

MODULA APPROACH

I have recently started a BSc Computer Science course and for the first year we are learning to use the Modula-2 programming language. Thinking ahead, for once, I bought myself a copy of the Amiga PD

JARGON BUSTING

Dip switch – a way of making manual adjustments to the way a device (typically a hard drive or printer) behaves. Printers have dip switches to control line feeds, perforation skips and font usage.

Emulator – a device, either hardware or software, that enables programs written for another machine to be used on the Amiga. The emulator makes the Amiga take on all (or most) of the characteristics of the foreign machine, and is transparent to the programs running under it.

Include files – these provide all the offsets needed to access system library routines, and the formats for all system structures.

Printer driver – a program that sits between any applications program producing output and the printer. It converts any codes describing text and graphics format into a form suitable for a specific printer.

version of Modula-2 from PD Soft, which was written back in 1986. Sadly, I've had some problems.

Both the compiler and the utility which runs the programs cause my A1200 to crash most of the time and these can be quite spectacular, causing all the Workbench icons to disappear, and making spurious text appear on the shell windows. And the hard disk goes mad when I re-boot – it seems to be accessed more than normal when booting.

My version of Modula-2 appears to be very basic, and lacks a lot of the standard libraries that we have on the university PCs. So is there a more up-to-date version of Modula-2 available to the public? Is there a commercial version available? And why does my version crash so often?
Adam Greenaway
Wokingham
Berkshire

The version of Modula-2 you are using is so old it's unlikely it ever ran properly. And I don't know of any PD compilers now available which are fully supported by the authors.

A knowledgeable friend (thank you Jim Hawkins!) explained that Modula-2 is a very interesting language. It was designed at ETH in Zurich as the successor to Pascal, with the aim of providing complete data-hiding and "safe" code. Modula-2 is widely used in Europe and Russia (Soyuz was programmed in Modula-2) and is now making in-roads even on the American continent, particularly for large or safety-critical applications like nuclear power stations. Modula-2 has now been succeeded by an object-orientated language called Oberon-2. NASA are about to start a major project in Oberon-2.

But back to your questions! There are several options for commercial Modula-2 compilers:

TDI Modula-2: good, but sadly no longer supported.
A&L Modula-2: good, and this one is still supported.
M2Sprint Modula-2: excellent, used for a number of commercial CDTV applications. Unfortunately, this is also no longer supported.

If you're interested in Oberon-2, then check out the A&L version and *Extacy*. *Extacy* is rather neat, because it converts Oberon source code to C source code – but this means that you'll also need an ANSI C compiler. A&L generates native code. *Extacy* is both Modula-2 and Oberon-2, and includes the PIM and ANSI libraries. These all cost £100-150.

The UK source for Modula-2 is Real Time Associates, Canning House, Canning Road, Croydon CR0 6QF, ☎ 081-656 7333. ***TS***

EMULATION SENSATION

I have just bought an A1200HD machine to replace the Spectrum 128 I have used for a number of years now. I have a substantial amount of software that I'd like to continue to use on my Amiga. Should I get a PD Spectrum emulator? And if so can you tell me what equipment I will need to transfer the spectrum programs I have to the Amiga?
Robert Brown
Sandown
IOW

Virtually every Spectrum emulator I've seen for the Amiga uses a sound sampler connected to the Amiga's parallel port to 'sample' the output from a standard tape player which is pretty much how the Spectrum loads programs anyway. If your Spectrum emulator supports this method of loading, then buy yourself a sound sampler. HiSoft market a very nice range of samplers and can be contacted on ☎ 0525 718181. ***JH***

IMAGINE VS THE GURU

After some while successfully using *Imagine 2* for ray tracing I am now getting a Guru message (80000005 – 68000 & Division By Zero Error). This only occurs during ray tracing and happens when around 96 per cent of the image has been completed!

Increasing the stack size does not help. I'm using an Amiga 1200 with a 68882 maths co-processor added and a total of 6Mb of RAM (2Mb Chip and 4Mb Fast). Losing a 24-bit image when it's 96 per cent finished is no fun – any ideas?
Paul Davis
Street
Somerset

I'm shooting a bit in the dark on this, especially since you don't mention what size images you are trying to render. It may be that you have a problem with your Amiga 1200's RAM, its FPU or the software itself.

Do smaller sized images render successfully or do they also abort at around 96 per cent complete with the same error? Does this happen to every image, or just to ones which contain a particular object or type of effect? And are you using the FP or the non-FP version of *Imagine?*

Imagine is not without its bugs (you'll probably be familiar with the slice bug already) and you may have come across another one. Make a new version of your *Imagine* disk (in case the software has become corrupted). Eliminate everything which is different between your current renderings and ones that have previously been successful. Try rendering old projects again and see if they still work OK. If not, suspect the hardware. ***GW***

JUST BY CHANCE

Some years ago, when I owned a BBC computer, someone gave me a short program to provide random numbers in any given range. I now find that I could do with a similar facility again. Can you help?
W Lloyd
Formby
Lancashire

Presumably your BBC program used BBC Basic in conjunction with a standard **RND()** type random number generating function. Here's a short HiSoft Basic Amiga program that will do a similar job...

```
INPUT "Enter lower limit"; lower%
INPUT "Enter upper limit"; upper%
RANDOMIZE TIMER
WHILE (ASC(INPUT$(1))<=32)
  x=RND
  n%=x*upper%-x*lower%+lower%
  PRINT "RANDOM NUMBER IS:"
  PRINT n%
WEND
```

The program collects the range limits, seeds the random function using the timer, and then executes a loop that will generate a random number each time you press the space bar until such time as you press any other key (when the program terminates). ***PAO***

MULTIUSER AMOS

I have just purchased *AMOS Professional*, which I am very pleased with. However, I notice in section 10.04.01 of the manual that it's possible to send information down the telephone lines using AMOS's powerful Serial port commands. How do I send messages (preferably text) using a modem?
George Bovey
Exeter
Devon

AMOS Professional is capable of communicating with other machines over the telephone lines but both you and your friend will have to have a modem so that the digital information your Amiga uses can be converted to the analog pulses that travel down telephone lines. A basic 2400 baud modem can be picked up for around £100 these days, so this must be taken into consideration if you want to proceed further. To be perfectly honest, *AMOS Professional* isn't too great at communication with modems, so you may want to get a freely available extension for AMOS called 'LSerial' that contains all the commands you'll need to handle the 'AT' instruction set used by modems and the many transfer protocols used by most bulletin boards. *LSerial* is available from most good public domain libraries. AMOS' serial commands are really aimed at games programmers who want to incorporate multiuser 'null modem' support into their games software. ***JH***

GETTING LEFT BEHIND

I have a problem with my Canon BJ-200 printer. Canon sent me a printer driver a while ago for a BJ-10 (which my printer emulates) and this installed okay on my Workbench 1.3.2 disk. I have been trying to use *Interword*, which uses the driver from Workbench, but found I could also write my own driver by typing in escape codes from the printer manual. So I have made two drivers, one for BJ emulation and one for Epson emulation. *Interword* now

continued on page 42

JARGON BUSTING

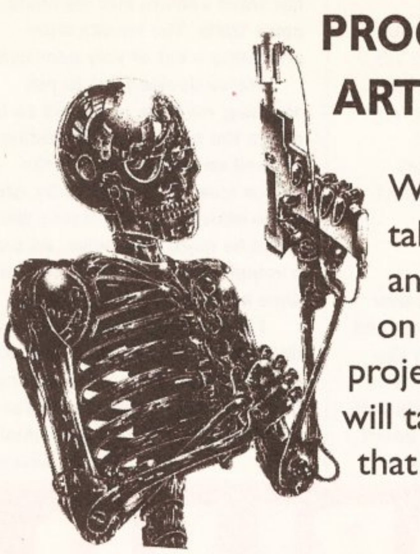
ANSI C – a standard for the C language devised by the American National Standards Institute. It differs in some parts and clarifies others of the original definition of C given by Kernighan and Ritchie, the language's creators.

Guru – a message from the Amiga system saying that a fatal error has occurred. The message appears in a large, flashing red box and includes two numbers which are (allegedly) of use to programmers trying to ascertain why their programs have failed.

Modem – a device which connects to the Amiga's serial port and converts computer signals into a suitable format for transmission along a phone line. Likewise, it will convert incoming signals back into a form the computer can recognise.

Pascal – a structured programming language, developed by Nicklaus Wirth and popular with academics.

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❒ AMOS FRUIT II +Y	❒ S.O.T.A. SPACEBALLS +Y	❒ MED MODS 1 +Y	❒ ENGINEERS KIT +Y	❒ LITTLE OFFICE +Y
❒ TETRIS AGA 1200	❒ PHOENIX DEMO +Y	❒ MED MODS 2 +Y	❒ FREECOPY 1.8 +Y	❒ 24 BIT UTILITIES +Y
❒ ROAD TO HELL +Y	❒ HOY DEMO AGA 1200	❒ DRUMLOOP SAMPLES +	❒ AMIGA BEGINNER +Y	❒ PRINT STUDIO +Y
❒ EXIT +Y	❒ HOY MIND WARP 1200	❒ PRO SAMPLES 1 +Y	❒ KICK 1.3 +Y	❒ SID 2 +Y
❒ PACMAN RETURNS +Y	❒ DEMON D LOAD (2) +Y	❒ PRO SAMPLES 2 +Y	❒ 500+ EMULATOR	❒ BUSINESS LETTERS +Y
❒ G.PRIX MANAGER +Y	❒ KEFRENS D.A.N.E.+Y	❒ MEGA SAMPLES (5) +Y	❒ MAVRICK COPY +Y	❒ EASY CALC PLUS +Y
❒ STARBASE 13 (2) +Y	❒ ODYSSEY (5) +	❒ MEGA MODULES (4) +Y	❒ VIRUS ALERT +Y	❒ NCOMM 3 +Y
❒ TEXAS CHAINSAW +Y	❒ JESUS ON E's (2) +	❒ OCTAMED 5 DEMO +Y	❒ SKICK WB3 +Y	❒ VIEW TEK v1.5 +Y
❒ KLONDIKE 1200 (3)	❒ ALCHEMY (2) +Y	❒ PROTRACKER 3.1B +Y	❒ MENUMASTER 3 +Y	❒ MAGIC W/BENCH HD
❒ STAR TREK (2) +Y	❒ WICKED SENS (2) +Y	❒ CHIP MAN SAMPLES +Y	❒ ANDYS WB3 UTILS Y	❒ ADOBE FONTS (8) + Y
❒ OSCAR DEMO 1200	❒ NEURAL ASSAULT +Y	❒ MUSIC MADNESS +Y	❒ TETRA COPY +Y	❒ POOLS WIZARD + Y
❒ MOTOROLA 2 (2) (1200)	❒ THE WALL (6) +Y	❒ CYBERNEX MCD +Y	❒ CRACK & COPY UTIL +Y	❒ TEXT ENGINE V4.1 + Y
❒ BONDMINE 12 + Y	❒ RETINA EURO +Y	❒ BEAT BOX (2) +Y	❒ FAKEMEM +Y	❒ PYSCO COPIERS + Y
❒ MR MEN OLYMPICS (2) + Y	❒ PYGMY EXTEN +Y	❒ RHYTHMIC ORG +Y	❒ PRINTER DRIVERS +Y	❒ IMAGINE OBJECTS (7)
❒ JELLY QUEST + Y	❒ MADE IN CROATIA +	❒ SHAMEN MIX +Y	❒ EMULATORS IBM ETC +Y	❒ OCTATUTOR +Y
❒ SKID MARKS + Y	❒ KEFRENS D/DRMS (2) +Y	❒ XMAS SONGS +Y	❒ HARD DRIVE UTILS +Y	❒ KICK + (1200)
❒ ATTACK + Y	❒ CROMAGIC (1200)	❒ MUSIC MODS (5) +Y	❒ WB3 BACKDROPS Y	❒ X BEAT PRO + Y
❒ SYSTEM DEFENDER + Y	❒ POINT OF SALE (1200)	❒ DATA X THE VICTIM + Y	❒ NUMPAD (600 ONLY)	❒ MAGNUM 1-7 + Y
❒ FATAL MISSION 2 + Y	❒ FREAK BODY (2) (AGA)	❒ DATA X TRILOGY + Y	❒ SPECTRUM 1.7 +Y	❒ FONT FARM 3 + Y
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recognises different typeface styles for these, but I can't see how to install or print different pitch sizes.

Canon have now sent me a BJ-200 driver but I can't install it on my Workbench 1.3.2 disk because it takes up about 190K of space. The man from Canon suggested I delete some files, but which ones?

Even if I do get the BJ-200 driver installed, I will still have to type in the escape codes as for the BJ-10 emulation. What I really want is different type styles and pitch sizes available in pull down menus.
Alex McNab
Harrogate
N Yorks

One of the better word processors like *Wordworth 2* or *Protext 5/6* will provide you with all the features you require. However, you should be aware that much modern Amiga software has been designed with Workbench 2 and 3 in mind and won't support or wasn't properly tested with earlier versions. But *Wordworth* will require more than the 1Mb of memory you have fitted to your Amiga 500, and although *Protext* will run it will use most of your memory up on loading, leaving you little room for creating documents.

While the BJ-200 driver should work under Workbench 1.3.2, it hasn't been fully tested with this version of Workbench and the subsidiary preferences and font downloading programs require Workbench 2 or later. To install the BJ-200 driver on to Workbench 1.3.2, install everything to RAM: and then copy the Canon BJ5-230 driver from there to Devs/Printers on your Workbench 1.3.2 disk. Then run Workbench Preferences and select and save this driver. ***JW***

BE PREPARED...

VIDEO

I help out as a leader with a Scout group and we came up with the idea of making videos to show in schools and colleges to help promote the Scout Association in our locality. One of the Venture Scouts brought along her video camera and we made some trials. The results were promising – but of very poor quality.

We've decided not to put anything we have produced so far out to the public, concentrating instead on trying to make the videos look a little better by adding some effects. We do realise that it could be quite expensive. As we are a voluntary organisation we don't have much money to spare.

I have an Amiga 500 and we've discovered there is other equipment available to use for video editing on this machine. Could you help us by telling us exactly what we need?

continued on page 45

ROMBO RUMBLED

VIDEO

I own an Amiga 1200 and use it for games and video displays. I also own Rombo's Complete Colour Solution digitiser and a video camera, which I use to digitise frames to display with *Deluxe Paint 4 AGA*, then transfer to video via the Video Out socket of the A1200.

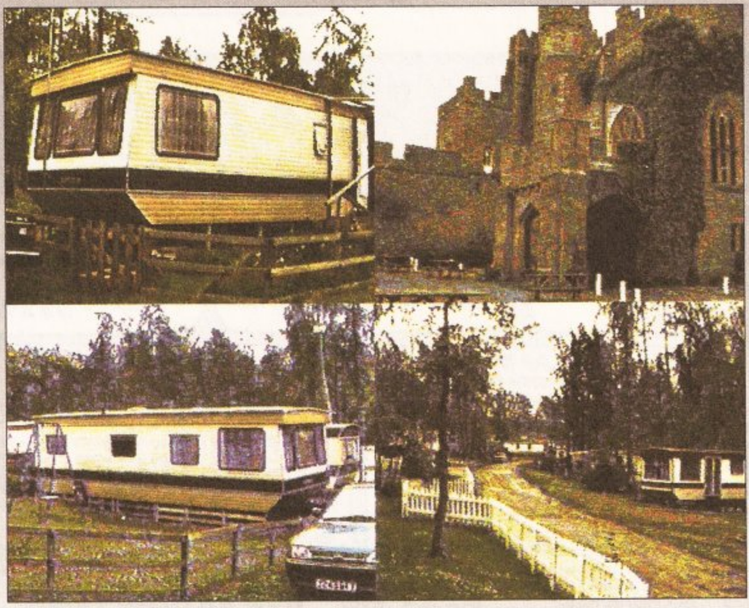
What I do is grab a picture from video (in HAM), save it, then use *DPaint* to reduce it to 256 colours, and convert it from low-res to high-res to get better definition when it's transferred to video.

But the picture is now only a quarter of the size of the screen, so I put a picture in each quarter of the screen. I know 256 colours won't be enough, so I change the palette to HAM-8 and push the first picture to the spare page or pick it up as a brush. The problem starts when I try to load the second picture. The first picture suddenly changes colour and doesn't look right, and it continues to get worse when I load pictures 3 and 4. The messy-looking composite picture is what I'm ending up with. Is there any way round this?

I've heard that there is a software-only upgrade to Vidi-Amiga 12 version 2.0 that uses the A1200's palette and resolutions. If this is true, how much is it?

Can you also tell me if it is possible to make an animation that is spread over two or more disks and get *DPaint* to look for the extra frames and load them? (They will be low-res 16-colour frames that I have grabbed from video.)
Martin Ansell
Chester-Le-Street
Co Durham

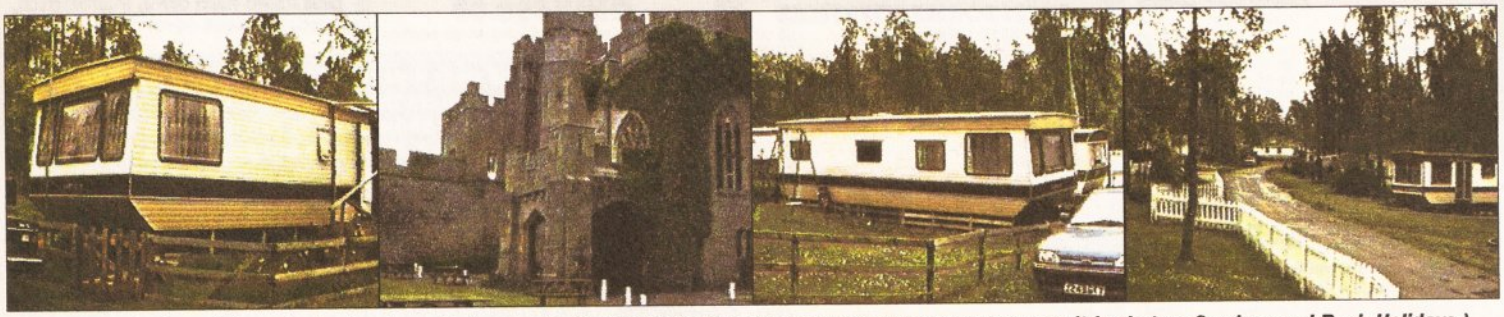
To get all your images looking right when you put them together on one screen, you'll need to ensure that they all have matching colour palettes. Choose one image as representative and load this first when you are working with *DPaint*. Then, when you load subsequent images into the spare page make sure that, before carrying out any further operations, you first restore the original palette (by using **Color/Palette/Restore Palette** from the pull-down menus) and then perform a remap (**Color/Remap**). Now when you cut and paste the image across to the front page it will have the same palette as the first image and things should look rather more sensible.



If the four pictures are imported without using Color/Palette/Restore Palette between each one, the unappetising mess above will be your reward.

Yes, you're correct about the Vidi-Amiga 12 software upgrade, and the good news is that Rombo went to great pains to make it backwardly-compatible and they assure me that it will work with your Complete Colour Solution. For details of the upgrade (which costs £9.95) call Rombo on ☎ 0506 414631 or write to them explaining what you need and enclosing payment. (For a review of the whole package, see our last issue – *Amiga Shopper* 33.)

As to your last point – one way to achieve this is to compile your frames into an animation, then split it into disk-sized chunks when you come to save it (you'll have to do a little experimenting here to get the sizes right). Then when you need to load the parts back into *DPaint* use the **Anim/Load/Append** method to glue them back together. You could also do the same using single frames, although this would be rather more time-consuming, and will involve adding frames, extending the length of the anim, loading more frames and so on. I would advise a thorough study of your manual for further hints and tips. ***GW***



This is how the four pictures look when imported properly. (Incidentally, the odd one out is the castle, because it is shut on Sundays and Bank Holidays.)

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And could you put out an appeal to your readers for any unused equipment which may be of use to us, as well as putting us in contact with anyone who can help us with this project through sponsorship and/or equipment loans?
Paul Jackson
(25th Newham East Scout Group)
East Ham
London
☎ 081-552 7579

It takes a lot of time, effort and skill, not to mention access to suitable equipment, to make a presentable video – but at least you seem to have realised this. Much of the work of putting a good production together happens before you even pick up a camera. A well-planned script which flows and keeps the audience interested is very important.

Camera skills and production values are also important, as is getting the best equipment, but with careful planning it's perfectly feasible to make a finished programme entirely with a camcorder, shooting everything in the order that it will finally be presented and doing all the editing 'in camera' as you go. Check out your local library for a selection of useful books on video production.

As for editing with your Amiga 500, you'll need suitable software and hardware for controlling both the camcorder plus a video deck for editing the material onto. In reality you would probably do much better to use a properly-equipped editing facility where the right equipment is already in place and the owners know how it all works. By editing in an established facility you'll get the benefit of someone else's knowledge and everything will go more smoothly.

You'll need access to a vision mixer and several video decks if you want to do such effects as crossfades and wipes. You'll also need a genlock and suitable graphics software to add titles or captions to your production – an expensive outlay if you want to produce a good-looking tape. I understand that you are amateurs working to a limited budget, but will the people who see the tape realise this? Get as much experienced help as you can – and don't be afraid to ask questions and learn as you go along.

Sponsorship could come in a variety of forms – anything from free time in an edit suite to loaned equipment for production. Contact a local video club and ask them about any facilities available in your area. A local school or college may well have video equipment available. And ask your Borough Council about any local arts organisations with video equipment for hire.

Find out about getting grants from your Regional Arts Board. Approach manufacturers of video equipment like JVC, Sony and Panasonic and explain what you want to do ("It's in a good cause...") and what's in it for them ("You'll be credited..."). Try local video shops and stores. Make it into a community effort; involve parents and perhaps non-Scouts as well. Maybe you could get someone from a video production company to give a talk to your Scout group and gain contacts from that.

Anyone willing to help out should call Paul on the number above. ***GW***

SIZE ISN'T EVERYTHING

VIDEO

When I am using *Imagine 2.0* I find it difficult to load a backdrop image or global brushmap in the Action Editor. When the image is about to be rendered, one of two error messages appears informing me that either "Backdrop picture is wrong size" or "Can't find Global Brushmap". Steve Worley's *Understanding Imagine 2* book (which I highly recommend) says the backdrop picture has to be the same size as the picture being rendered – in my case ILBM 24-bit.

How can I tell what size my IFF files are? Is there any software (PD or otherwise) which will let me find out? Can I also tell what size *Scala* backgrounds are by this method?

Finally, could you please explain the differences between the various types of ANIM format and the best software, PD-wise, to create such a file from separate pictures?
D Sturman
Newark
Notts

You seem confused about what constitutes image size and format. Without going into detail I can offer practical solutions to your problems.

The first of your troubles ("Backdrop picture wrong size") refers to the fact that the X and Y sizes of your desired backdrop image don't match those of the image that you've instructed *Imagine* to render. For instance, if you've set a rendering size of 640 by 512 pixels, then your backdrop image must also be 640 by 512 pixels. Its format is not especially important, so long as *Imagine* can read it – it's the size that counts. You could for instance use a 640 by 512 8-colour image, or a 640 by 512 24-bit image, so long as the backdrop's size and the rendered output size match. It's a pain, but that's the way Impulse designed it and there's no way round it. Worse, if you want to render a smaller image as a preview, then you'll also need a scaled-down version which matches the size of the preview! Remember that this also applies to Quickrender rendering and that you'll need to change *Imagine*'s Quickrender presets accordingly.

Your second problem is more straightforward. It sounds like you've not specified the entire path to where your desired global brushmap image is stored. So if your brushmap image is called "**BrushMap.iff**" and it is on your hard drive partition DH1: in a drawer called ImaginePix then in the Action Editor's global brushmap requester you will need to type "**DH1:ImaginePix/BrushMap.iff**". This should do the trick. You might find it easier to set up a few assigns if you have long path names.

As for finding out the size of your images, a good bet is to use a commercial image processing program like *ADPro* or *ImageFX*, though these may be too costly for you. There are PD programs which can help though. Check out *Wasp*, it's a freeware PD program (the latest version I've found is called wasp202b, Fish 716) for converting images between several different formats. It can also tell you what size and format an image is – just open a Shell, type **WASP**, followed by the path and name of the picture you want examined and some data will appear on screen. The last line tells you about the image size and format. *Wasp* will tell you about any file format it understands, including all IFF formats, GIF and several others, but not JPEG images. Since *Scala* backgrounds are IFF images, you *can* find out what size they are – and I confirmed this by trying it myself.

Another excellent PD image converter, and one which I would recommend over *Wasp*, is *HamLabPlus* (a slightly crippled demo version is available on Fish 726). This will also serve all your requirements – plus it has a user-interface, where *Wasp* relies in CLI-input – as well being able to handle more image formats, including JPEG. You'll need to register it if you wish to use images over 512 by 512 pixels in size.

I'm afraid I won't be describing the different ANIM formats (far too complicated) but there are several programs which allow you to make anims from a series of stills. Don't forget that *DPaint* can do this, as well as several other commercial programs, but since you want PD candidates, try either *Rend24* (on this month's cover disk) or *ViewTEK*, which includes a program called *MakeAnim7*. Incidentally, there's also a text file supplied with *ViewTEK* called **Anim7.doc** which goes into a lot of detail about anim formats.

I'd recommend *Rend24* if you plan on using *Imagine*-generated images to make the anim because it contains a lot of features vital to the job – like palette locking, scaling, conversion to other IFF formats, dithering, waiting for frames to be rendered, and so on. ***GW***

JARGON BUSTING

Genlock – a way of slaving one video source (eg an Amiga) to another (eg video tape) in order to synchronise their signals. This allows stable wipes, mixes and other effects including overlay between the two sources.

IFF – Interchange File Format is a means by which data from different graphics or sound sampling programs are saved in a compatible way. It allows data to be exchanged between programs very easily and avoids the situation on, say, the PC where dozens of different graphics packages each save data in incompatible formats.

ILBM – Interleaved Bit Map is the IFF sub-format in which graphics images are stored.

MIDI – (Musical Instrument Digital Interface) a standard for electronic instruments that allows a number of synthesisers to be controlled by a single keyboard or sequencer.

MIDI BUT NO INTERFACE?

MUSIC

I use my A1500 as a sequencer/sample playback unit and occasionally also use an A500 as a sample playback slave sync'd via MIDI. The A1500 has an internal MIDI interface and so the serial port is free. The A500 has one of those horrible stick-out-of-the-back interfaces that are always falling out. Can I use my serial interface cable (used for Data-link games) to by-pass the MIDI aspect altogether?
Alan Slinn
Gravesend
Kent

MIDI communications are achieved with perfectly conventional serial-style data transfer and there's no reason at all why the direct serial link you suggest would not work.

The only danger is, if you set up that direct serial link and then, at a later stage, think you can use the apparently free MIDI port on your A1500 to interface the existing set up to any other MIDI equipment you might acquire. ***PAO***

CODE CLINIC CODE CLINIC CODE CLINIC

TOBY SIMPSON GETS INVOLVED WITH SOME EURO-PROGRAMMING

CODING

Author: Graham Keellings
Program: GadTools menu program.
Language: C
Fault summary: Attempting to simplify menu selection code.

This month's code clinic is a little different: it's the first international problem we've been given to solve (the programmer lives in Munich, Germany), and for once I'm not finding a bug in an existing program – it's more a case of finding a solution to a rather taxing problem.

Graham is up against one of the age-old problems of menus on the Amiga, how to avoid reams and reams of **CASE** statements. Take this example: if you have written an application which uses menus, and you want to call certain functions when menus are selected, you are likely to end up with code like this:

```
  while(menucode != MENUNULL)
    {
    switch(MENUNUM(menucode))
      {

/************************************
************************************
***
*
*  PROJECT MENU
*  ============
*/
      case MENU_PROJECT:
        switch(ITEMNUM(menucode))
          {
          case ITEM_OPENTOPIC:▼☛
 // Open New Topic
 break;
          case ITEM_STEGOSAUR:▼☛
 // The dinosaur option:
 break;
          case ITEM_OPTION3:▼☛
 break;
```

...and so on. If your application has stacks of menu options, you are going to end up with stacks and stacks of **CASE** statements, and if your menus have sub-items, you get even more. Some of the programs I have written have pages and pages of these statements, which makes for very long programs indeed. Things get worse if you want to add a menu item somewhere, particularly if it's in the middle of an existing menu, because you then have to renumber all your **ITEM_** defines.

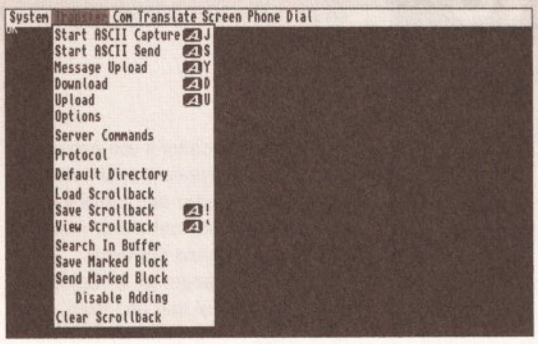
A better way is to automate the process, so that each menu item had a function name associated with it. This way you could detect that a menu choice has been made and then call a named function. To this end, "**Gadtools.library**" was included with every Amiga with Kickstart 2.0 and later, and this greatly simplifies the generation of menus. Previously, this involved lengthy structures and, if your program supported different fonts, you had to handle the layout yourself. Gadtools made this process much simpler: you only had to specify a very simple menu structure and, with a couple of calls to **gadtools.library**, you could generate and lay out the menus ready to add to your application. A gadtools structure might look like:

The symbol ☛ means do not type a return – keep typing to the end of the next line. ▼☛ means type a space, then keep typing to the end of the next line.

```
struct NewMenu MyMenus[] =
   {
   {NM_TITLE,   "Project",☛
  NULL,   0,  0,  NULL},
   {NM_ITEM,    "Open...",☛
   "O",    0,  0,  NULL},
   {NM_END,    NULL,  NULL, 0, ☛
0, NULL}
  };
```

This would allow you to create a single menu called "Project" with one option – "Open". This option would have **<right-Amiga> O** as the keyboard short-cut. Each **NM_ITEM** tag contains a menu item, its optional keyboard short-cut, some flags, mutual exclude data and an optional pointer to some user-data.

The pointer to "user-data" is the key here. Since we can point this to pretty much anything we like we could, in theory, point it to a function and, when a menu item gets selected, simply call the function which was pointed to in the user-data. Normally, people put item numbers in the user-data field. Using functions in this way is not documented anywhere, but it is commonly used in major commercial Amiga applications, and makes programming large Amiga menus much easier, and less prone to bugs.



This kind of long menu used to involve reams of "switch-case" statements in C. Follow this month's Code Clinic advice and you can do it all automatically!

To do this, there are several steps which we must take. Normally, for Amiga menus to work we set the **IDCMP_MENUPICK** flag in our window. This allows us to receive messages whenever the user makes a menu selection. Normally, as shown in the above example code which uses **CASE**s, we would use special macros such as **MENUNUM** to see which option was selected. If we rewrote the **MENUPICK** part of our code to look like the following, we could extract the value held in the menu option's UserData field and treat it as a function address:

```
  case IDCMP_MENUPICK:
       while (code != MENUNULL)
            {
            struct MenuItem *item;
            MenuFunc selectedfunc;

            /* Get the address ▼☛
of the menu item selected */
            item = ▼☛
ItemAddress(MainWinMenu, code);

            /* Now get a valid ▼☛
pointer to a function */
            selectedfunc = ▼☛
(MenuFunc)GTMENUITEM_USERDATA☛
(item);

            /* Call the function */
            if ▼☛
((*selectedfunc)(item))
               {
                ... menu item
succeeded ...
               } else {
                ... menu item failed
...
               }
       }
```

Let's now look at this in greater detail. Notice that we define two variables: **item** and **selectedfunc**. **Item** is a pointer to a **MenuItem** structure, and **selectedfunc** is of the type **MenuFunc**. The first is straightforward – this is our Intuition menu structure. The second is a new type, and it is defined like this:

```
typedef int (*MenuFunc)(struct▼☛
MenuItem *);
```

This defines a new C type which is a function which returns an integer value. This has one parameter, which is a pointer to the **MenuItem** of the menu option selected.

In order to call our function, we set our **selectedfunc** to point to the function we placed in the UserData field for the selected menu item and call it. We're allowing our menu item to return an integer so that we can deal with possible results, such as "the user has just selected QUIT from the menu" and so on. How this is dealt with is up to the individual programmer, but it's best to make it return a simple "Yes, this worked" or "No, this failed" and deal with the result as a Boolean value.

Now we can call functions, how do we set out the *NewMenu* structure to point to functions?

```
  struct NewMenu ▼☛
amshopper_menus[] =
    {
     NM_TITLE,    "Project",☛
   NULL,   0,  0,  0,
     NM_ITEM,    "Open...",☛
   "O",    0,  0,☛
   (APTR)OpenItemFunc
     /* and so forth for the ▼☛
other menu options .. */
    {NM_END,    NULL,  NULL, 0,▼☛
0, NULL}
   };
```

Note that we have cast the function to be an untyped pointer (APTR). This enables us to compile programs with function pointers like this without the compiler objecting. For the above menu example, the actual function for **OpenItemFunc**, automatically called when "**Open...**" is selected from the menu, might look like this:

```
  int OpenItemFunc(struct▼☛
MenuItem *mi)
    {
        printf("You've just▼☛
selected OPEN from the menu!\n");
        return (0);
    }
```

Putting all the above code snippets together would ensure that the function "**OpenItemFunc**" would be called every time the user selected "**Open...**" from the applications menu. We pass in a pointer to the item's **MenuItem** structure so that the function is able to process any relevant information – for example, checking flags to see if this item is ticked or not.

My special thanks to Eddy Carroll for helping me with this month's Code Clinic problem.

JARGON BUSTING

Library – programs already present in the operating system to make use of the Amiga's special features. These 'library functions', may (and should) be used by applications programs, so that programmers do not need to write their own.

Structure – a class of data storage whereby a group of primitive data types are joined together in a particular order to form a user-defined type.

Cracking the Shell

Mark Smiddy proffers a polite but informative introduction to ED, the AmigaDOS screen editor, and ushers in the basics of scripts.

Some of you might be wondering if AmigaDOS is the preserve of those with an IQ greater than 200. But don't worry – it all comes together when you can view AmigaDOS as a whole. In the earlier parts of this series, I have made reference to scripts and editing. These cases were intended for experienced users, but the time has come for you, too, to get a grip of the AmigaDOS screen editor, *ED*.

The 1.3 incarnation of *ED* is crude but does the job. On the other hand, its counterpart, *EDIT* is about as friendly as a rabid Rottweiler – and about as easy to handle. Both commands can be found in the **C** directory of your Workbench. For this example, I'll show you how easy it is to create a simple program in AmigaDOS – a script.

With all programming, the most important task is first to decide what you want to do! The first of these short examples will mimic the "Hello world" programming exercise – a classic. The second will then introduce an unconditional branch – like **GOTO** in BASIC – to perform a simple closed (endless) loop.

In most modern variants of the BASIC language, we could use the following program to get "Hello world" printed on the screen:

```
PRINT "Hello world"
```

Entering the **RUN** command would start the program. The situation is much the same in AmigaDOS, although the command names are different. The same program, written in AmigaDOS, reads like this:

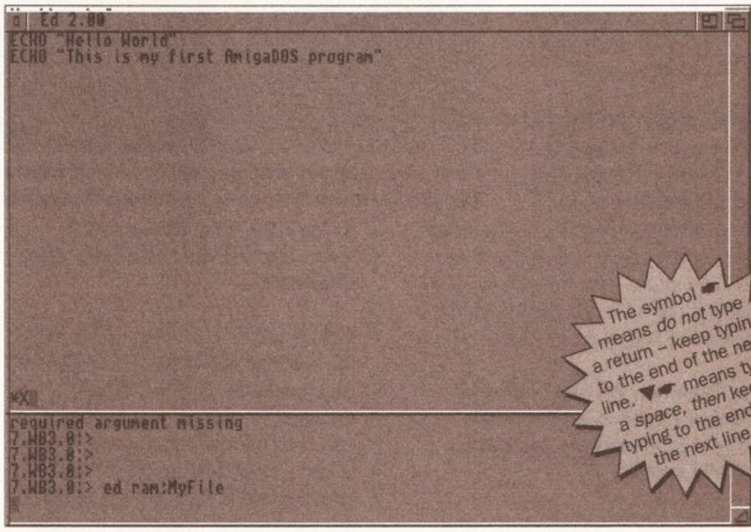
```
ECHO "Hello world"
```

Try that on your machine now. Open the Shell window and enter it, followed by the **<Return>** or **<Enter>** keys. **ECHO** is an AmigaDOS command which displays the string argument on the console window – just like **PRINT.** You could enter this command directly from the shell – like direct mode in many BASICs – but we want to be able to execute this as a program.

TAKE A WALK WITH ED

From the shell window type:

```
1>ED RAM:MyTest
```

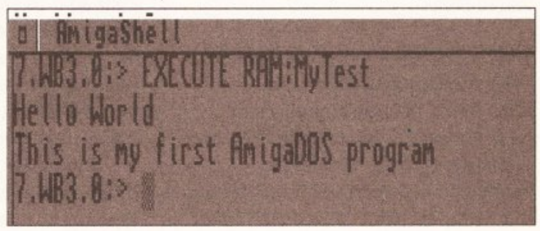


ED is a simple editor, with simple features, for simple files – nothing else. Still, that's perfectly adequate for our purposes here – a very simple program.

This enters the *ED* editor. When *ED* starts, it tries to load the filename specified as an argument – **RAM:MyTest** in this case. If the file cannot be found, *ED* assumes you want to create it and gives you an empty screen. Now enter this:

```
ECHO "Hello world"
ECHO "This is my first▼☛
AmigaDOS program"
```

When you have done that, press the **<Escape>** key — it's marked "Esc". You will notice the cursor (a coloured block) moves to the bottom of the screen next to an asterisk – *. This is *ED's* way of telling you it is ready to accept a command. Press **X** and then **<Return>**. This is *ED's* **eXit** command and tells it to save the file and quit. If you want to leave *ED* without saving, press **Q** and **<Return>** (for Quit) instead. *(ED* will prompt you if there are unsaved changes – press **Y** to confirm.)



It's easy to write (and run) a simple script file. And, let's face it, they don't come much shorter than this.

Now all we have to do is run the new command! Script files are interpreted by a special command, **EXECUTE,** which takes the name of the file to run as an argument. To run your first program, simply enter:

```
1>EXECUTE RAM:MyTest
Hello world
This is my first AmigaDOS program
1>
```

And there you have it – your first AmigaDOS program, running without a hitch. Impressive, eh?

Now let's add a small embellishment in the form of an unconditional loop. This will make the program execute until we tell it to stop. To make the correction, we just run *ED* again with the same original parameters that we used before:

```
1>ED RAM:MyTest
```

Now, as the window appears it contains the program you just entered. The cursor will be at the start of the first line. Press **<Return>** and the first line will move down one line. Now enter this:

```
LAB start
```

Use the cursor (arrow) keys to move the cursor to the end of the last line and press **<Return>.** Now enter:

```
SKIP start BACK
```

The completed program should look something like this:

```
LAB start
ECHO "Hello world"
ECHO "This is my first▼☛
AmigaDOS program"
SKIP start BACK
```

As before, save the file and exit *ED* by pressing **<Esc>-X.** Now run it as before. Notice how it seems to have run amok? You can stop the script by pressing **<Ctrl>** and **D** together. This

BEGINNERS BEGINNERS START HERE BEGINNERS

If you are new to the Amiga, the very idea of AmigaDOS – an environment where you have to learn and type commands, one at a time – might seem daunting. Why not just stay within the comfortable confines of the Workbench and handle the tricky bits with a CLI utility like *Directory Opus* or *SID?*

There are a number of reasons, but "eclecticism" is a good one. This adjectival noun is typically used to mean "choosing the best out of a broad range of options". I use it to illustrate a point: AmigaDOS is full of big, strange-sounding words that mean little until they are applied. An AmigaDOS user can be eclectic by choosing the best of several similar commands to achieve a similar goal. The *SID* or Workbench user must remain within the confines of the application's design – no matter how open-ended it purports to be.

Few people would disagree that many operations are more easily performed from Workbench, but very few operations can take full advantage of the machine's multi-tasking capabilities. For instance, what if you wanted to copy some files from one place to another? With Workbench you simply drag the respective icons from the source to the destination – from AmigaDOS you have to enter a command.

Now what if you suddenly realise you have copied the wrong icons? You have to wait until Workbench finishes, go back and delete them, and start again from scratch. But in AmigaDOS you can stop the command immediately – so the total time to complete the operation is much shorter. In addition, AmigaDOS allows you to select files by group much more accurately than is possible from Workbench. It also affords simpler access to a range of public domain and shareware utilities that can only be accessed from the Shell environment.

AmigaDOS is powerful and perhaps a little difficult to learn – Workbench is great for everyday tasks when you are not in a hurry. The two systems complement each other wonderfully. You can "get at" AmigaDOS by opening the Shell icon – you'll find it on your Workbench disk. Even if you have never done so before, try it now – you have nothing to lose.



ED is small and compact enough to keep it loaded into RAM. You can then use it to make all kinds of handy modifications...

is similar to the **<Ctrl>-C** sequence used to stop AmigaDOS commands, but this one halts execution of script programs. That alone covers the raw basics of *ED* and is all you need to know to get started.

EDITING WITH ED

ED has been substantially improved for AmigaDOS 2 with menus for most of the common functions and support for console copy and paste. These functions are described below, but for the moment it is a good idea to learn the keyboard shortcuts too.

1. Open the **"MyTest"** script as described above and move the cursor to the second line **(ECHO "Hello World")**.

2. Press the **<Escape>** key. Note how the little "*" prompt appears at the bottom of the screen. Enter **BS** and press **<Return>.** The command means "Block Start", hence "BS".

3. Move the cursor down one line then press **<Escape>** followed by **BE** – meaning Block End. *ED* isn't much help here, and it will not show you where the block is, or the fact you have marked the start of it: you have to remember that. There is a way around this, which I'll be discussing in a moment.

4. Move the cursor to the start of the fourth line and press **<Return>** to open a blank line. Move the cursor up one line to occupy that position and press **<Escape>** followed by **IB** – Insert Block.

5. *ED* complains "No block marked". This is because when you insert a fresh blank line (or do just about anything else) it loses track of where the block is. That "deliberate mistake" may seem a little unfair but it is better to learn *ED's* deficiencies at this stage rather than later on.

6. Repeat the block marking and insertion process described in steps 1-4 and you will notice the block is pasted into the new position. From now on I'll refer to *ED's* extended commands as **<Esc>-XX** so the command to mark the start of a block will be **"<Esc>-BS"**.

7. Following everything so far? Good. Position the cursor somewhere around the middle of the second line and press **<Esc>-BS.**

8. Move the cursor down to the fourth line and close the block using **<Esc>-BE**.

9. Now move the cursor to the end of the text and insert the marked block with **<Esc>-IB**. Notice anything strange? Even if you position the cursor in the middle of a line, a block is considered to start from the first letter on the line to the last letter of the closing line. Therefore it is not possible to copy part of a line or lines. You can copy a single line using **<Esc>-BS**, **<Esc>-BE** in the same position. From this we can deduce that, unlike most word processors and text engines, *ED* is a line-based, and not a character-based, editor.

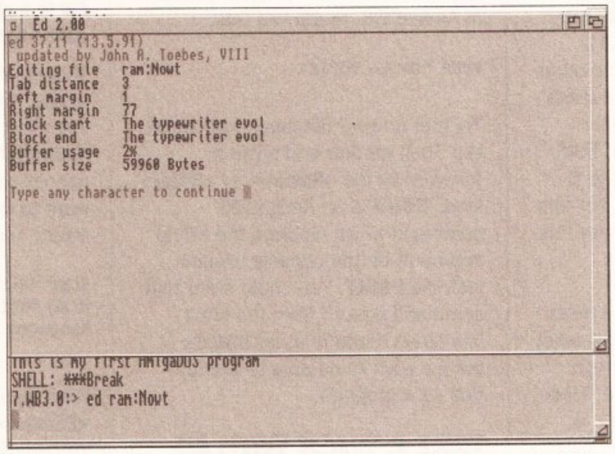
VIEWING BLOCKS

It was noted earlier that *ED* does not show marked blocks, but this is not strictly true. *ED* cannot show a block in highlighted text like more conventional window-based editors – instead it uses a much older system. To see this in operation, open a text file such as the one you created earlier and mark a block of two lines or more. Now use the following command: **<Esc>-SB** (Show Block).

You probably won't notice much difference unless you happen to be working on a large file and have positioned the cursor somewhere else in the text. When you give this command, *ED* moves the window of the currently marked block of text and that's it. The start of the block is the first line of the window: staggeringly useless stuff. Perhaps a more useful method is achieved with the **<Esc>-SH** (Show Headings) command. Open a blank *ED* window and enter the following:

```
The wily old journalist▼☛
jumped over the lazy editor
How razor-bill jumping toads▼☛
can level six piqued gymnasts
```

Mark the two lines and make a few copies of them, say enough to fill the screen – this should cause enough visual confusion to illustrate the point. Now move the cursor to around the middle of the text and enter a new line:



From version 2.00, ED's information screen is clearer. But it's still not in quite the same league as Wordworth or Final Writer.

```
The typewriter evolved with▼☛
the qwerty keyboard
```

Mark the line, move the cursor to the bottom of the file using **<Esc>-B** (Bottom) and show the block with **<Esc>-SB.** This isn't very clear, so try **<Esc>-SH**: an information display will appear at the top of the display, reading something like this:

```
Editing file:   RAM:
                MyFile
Tab distance:   003
Left margin:    001
Right margin:   077
Block start:    The
     typewriter evol
Block end:      The
     typewriter evol
Buffer usage:   003%

Type any character to
continue:
```

You can see that when a block is selected the first 19 characters of the start and ending lines are displayed. Most of the other information here should be fairly self-explanatory. Buffer usage shows the size of the file in proportion to the amount of memory allocated to *ED*. This buffer size is determined by *ED's* command line options and is not worth discussing at this stage.

LINE AND BLOCK DELETE

Since it is not possible to move lines and blocks around, they have to be deleted instead. Deleting entire lines is simple and painless, although you have to be a little careful with the keyboard repeat if you are deleting a lot at once. You can remove a whole line with **<Ctrl>-B,** delete the next word with **<Ctrl>-O** or delete to the end of the current line with **<Ctrl>-Y.**

Deleting a number of lines at once is more simply achieved using blocks. Simply mark the block you want to get rid of using **<Esc>-BS** and **<Esc>-BE** then enter **<Esc>-DB** (Delete Block). A similar escape command, **<Esc>-D,** may be used to delete a single line although this is usually reserved for *ED's* macro language which is not detailed here.

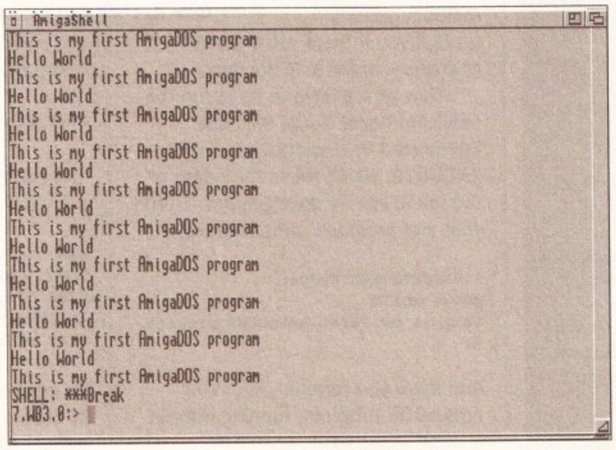
QUIRKS AND IDIOSYNCRASIES

ED falls some way short of being a word processor, and even though it was designed as a text editor it can still make life difficult. *ED* automatically wraps words when the line length extends beyond the right-hand margin (77 characters by default), but you cannot re-join the line by pressing backspace. Let's try that to see what it means.

Set the left-hand margin at 20 characters using **<Esc>-SL20** and the right-hand margin at 50 characters using **<Esc>-SR50**. You'll need to press **<Return>** once, because the change does not take effect on the current line. Now type in a few words. It doesn't matter what – you may like to enter something from the magazine. When the cursor reaches the right-hand margin it nips back to the start of the next line.

This is okay if you happen to be editing a pure text file, but it will confuse an AmigaDOS program, because the lines are now effectively separated. Move the cursor to the start of the current line and press **<Backspace>**. Most text editors insert a "soft" carriage return at the end of lines which can be deleted and the lines re-joined. *ED* cannot do this, so if you start typing again you will notice that the margin settings are ignored.

continued on page 53



Oh no! The computer's gone mad! It looks like a scene from a bad episode of Star Trek but you can stop it with <Ctrl>-D.

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A600 SD WILD, WEIRD AND WICKED	Silly putty, F1 Grand Prix, Pushover, Deluxe Paint III*, 700 clip art set	194.99	209.99		
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210		569.99	584.99		
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CBM 1940	Leads. Ideal for AGA	269.99		1 year	
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HD SIZE MB	A4000/30 1+1MB SUBTRACT £70	A4000/30 2+2MB STANDARD VERSION	A4000/30 2+4MB SUPER EXP. VERSION	A4000/40 2+4MB	EXTRAS
80	WARNING - 1 + 1MB A4000s will not run most serious AGA s/w packages. If required, subtract £70 from 2 + 2MB prices	965	ADD £80 • ADD £80 • ADD £80 2 + 4 MB version comes with 2MB chip RAM + one 4MB chip of fast RAM, for on-board expansion to 16MB. We do not fit two x 2MB chips of fast RAM, which gives on-board expansion of only 8MB.	1889	Extra 2MB for 2+2 versions £99 • Extra 4MB for 2+4 versions £159 • Microvitec Cubscan 1440 recommended £399.99 • Same day warranty £39.99, extra 2 yrs £99.99
120		1039		1915	
160		1079 SPECIAL		1959	
240		1149		2139	
340		1219		2299	
540		1479		2459	

A4000/30 CO-PROs
68882 25 MHz.........ADD £79
68882 50MHz.........ADD £159
Fitting FOC if purchasing A4000

CD³² CONSOLE

SPECIAL

Choose any* 3 CD discs (see software section) for **£59.90** *up to £34.99 RRP each

CD³² SOFTWARE

Over 75 titles specially written for the CD³² should be in stock by Christmas (phone for list), including Syndicate, Zool 2, Jurassic Park, Chaos Engine, Robocod, many of which include a full CD music track alongside the game. About half of existing CDTV titles are compatible. CD³² will also play normal music CDs and CD+G discs

CD³² Console (with Oscar AGA, Diggers +Joypad FREE)
£279

CD³² + FMV Card as above
PLUS FREE MUSIC VIDEO DISC
£465

CD³² Standard warranty is 12 months return to base.
12 months on-site warranty £39.99
Extra 2yrs on-site warranty £69.99

AVAILABLE NOW!
Full Motion Video module for CD³² (with Free Music Video Disc) £189.9

COMING SOON
Floppy drive, Keyboard, Mouse CD³² for A1200

WITH ANY COMPUTER

CHAOS ENGINE, SYNDICATE, PINBALL FANTASIES, NICK FALDO'S CHALLENGE GOLF
ADD £19.99
OR LEMMINGS, SIMPSONS, CAPTAIN PLANET, PLUS D PAINT III & GFA BASIC
ADD £14.95

A1200

1200 2MB	269
1200 +20MB HD	379
1200 +60MB HD	439
1200 +80MB HD	469
1200 +120MB HD	509
1200 +207MB HD	549
Extra 4MB + clock fitted	ADD £200

**CBM APPROVED HARD DRIVES
Full legal installation/utility disc and documentation and come with CBM on-site warranty service.

DON'T FORGET YOUR STARTER PACK! ADD £15 (SEE VALUE PACKS BELOW)

SPECIAL
Deskjet 500C and Starter Pack with any Amiga ONLY £285

FREE WITH ALL 1200s
NIGEL MANSELL AGA, TROLLS AGA AN[D] COMPILATION PACK
4 (top games)
OR
WORKS PLATINUM
(see Home App. Pack below)
OR DESKTOP DYNAMITE PACK
Wordsworth 2 AGA, Deluxe Paint 4 AGA, Oscar AGA + Dennis Print Manager
***ADD £49** (1200s o[nly])*
Limited - While Stocks Last

HOBBYTE VALUE PACKS

Hobbyte are famous for their packs, allowing you to choose what you want, whilst still benefitting from package deal savings. Remember, a bargain is only a bargain when you like what you get! So, if you aren't Wild, Weird or Wicked, Sleepwalker sends you to sleep, Space Ace leaves you feeeling empt[y], Paradroid does worse, if Basic basically isn't you, exercise your options and get real value for money from Hobbyte

TRAMPY'S AND NODDY'S PACK

Fun and educational for 2 to 11 years
(Some help may be required)

SPECIAL WITH AMIGA £39 | ALONE £59

Noddy's Playtime OR Big Adventure OR Merlins Maths	8 magical learning games at 3 levels, PLUS Junior Art pack, keyboard overlay and map 6 National Curriculum oriented games, stage 2, 7 to 11
The Shoe People OR Fun School 2	6 games with Trampy and friends, 6 years and under. The "Fun School" suite have won every award going. 5/6 wonderful animated games. 3 to 11 years, specify age.
Fun School 3 or 4 OR ADI Jnr Reading OR Counting	The loveable extra terrestrial entertains 4 - 7 year olds and helps towards achieving National Curriculum levels 1, 2+ 3
Deluxe Paint II + 700 Clip Art pics	Pics inc. children, Fairytale + Legend characters, Sport, Cartoons, etc.
Hobbyte Primary Educational PD Pack	Containing 10 fun while you learn games
Hobbyte 30 Easy Children's Games Pack	Simple games, or those with very easy levels. Even the youngest will be able to use some of these

STARTER PACK

A must for new users! All you need in one value pack

WITH AMIGA £15 | ALONE £25

10 blank discs	Make working copies of Workbench and other original applications discs as soon as you get them
Virus Killer	Check discs regularly, especially if sharing with friends
Mouse mat	Helps prevent dirt/dust collecting on mouse contacts

Plus Microswitched Joystick, 80 cap. lockable disc box, Dust Cover

HOT BUG GAMES PACK

The top-selling Hobbyte Hot Lot pack now includes the ultimate joystick !!!

WITH AMIGA £44 | ALONE £59

"THE BUG"	The only joystick ever to be given a Gold rating 92% AF, positive single-handed action, small and lovely!
10 "Hot List" Games The GREATEST!	See listing to the right for current HOT LIST, or phone for latest changes. Children's games available.
80 Prog. Hobbyte PD Greats Pack II 10 blank discs, mouse mat, 80 capacity lockable disc box, plus dust cover	Includes top games like Battlecars, Star Trek, Computer Conflict, Megaball, dozens of arcade classics, board classics and 'shoot-em-ups', Utilities, Word Processor, Spreadsheet, Database + Desktop Publisher and the ultimate virus killers - a must for every Amiga owner!

SERIOUS USER'S PACK

Interested in music, programming and graphics? Then this pack is for you!

WITH AMIGA £39 | ALONE £49

Easy Amos	THE programming language. Wonderful manual is simple and entertaining - ideal for complete novices
OR AMOS Professional ADD £10 for this option	97% AF rating - the second highest rating EVER given. Learn to professionally create your own games, utilities. Loads of sample progs included
Hobbyte AMOS PD Greats	Dozens of utilities, Protracker music modules, example programmes that no AMOS programmer would be without.
Deluxe Paint III, plus 700 Clip Art pics	Create your own designs to incorporate into your AMOS progs
MIDI Recording Studio & MIDI Interface	If you have a MIDI instrument, this is everything you need to compose and edit your music
OR AmigaVision	Powerful presentation and production tool

HOME APPLICATION PACK

Perfect for all Home Office needs

SPECIAL WITH AMIGA £29 | ALONE £49

Virus Killer Disk,
80 Prog. Hobbyte PD Greats Pack - see 'Hottest Lot Pack'
The Works Platinum — WP with UK spell chck, Thesaurus spreadsheet, 'Sideways' utility, database, graphics + comms module
Deluxe Paint III* with animation + 700 Clip Art pics
Digita Home Accounts — Keep track of credit card and bank accounts, budgets, etc
Any Two Hot List Titles

THE HOT LIS[T]

GREAT individu[ally] packaged gam[es] BETTER THAN T[HE] REST !!
(previous RRPs up [to] £39.99 each)

ANY 10 £29.9[9]
Or see packs across

Thunderbirds (7yrs+) ‡ - 92[%]
Silly Putty - 90%+ lots of m[…]
Elf/Toki/Puzznic (counts as 2)
Paperboy II ‡
Die Hard 2
Colossus Chess @
Challenge Golf
Battleships classic board ga[me]
Graeme Souness Soccer
Neighbours
Frankenstein ‡ @
Captain Planet
Silkworm Helicopter @ 93[%]
Tag Team Wrestling
Edd the Duck ‡
Stack Up ‡
Lemmings 92% AF
Round the Bend ‡
Fist Fighter
Sporting Triangles
World Cricket
Bart Simpson
Spiderman/Cptn America ‡
Arcade Trivia
Xenon - C+VG Game of the M[onth]
Blade Warrior - A Power, AF, A[…] superb reviews
Arnie

AWARD WINNERS
Space Ace, Kick Off, PipeMania, [...] (counts as 2)

‡ PARTICULARLY SUITABL[E] CHILDREN (MAY NEED H[ELP])
@ NOT A1200 COMPAT[IBLE]
TITLES MAY VARY

STOP PRESS! Desktop Dynamite AGA pack (see 1200 box) £69 with Amiga £79 alone

*DPIII needs 2MB for animation on HD[...]

NO OTHER DEALER CAN BEAT OUR CREDENTIALS

- Multi-million company with 9 years experience in Commodore product and here to stay
- Commodore trained staff are friendly and helpful and are parents, multimedia, educational, games, programming or technical specialists (usually more than one!)
- Open 9-6 pm Monday to Saturday and 10.00 am to 4.30 pm Sundays PLUS December late nights on Thursdays (St Albans only) for convenient shopping.
- Callers welcome for advice and demonstration at our 1600+ sq ft High St, Town Centre branches
- Same day despatch for most orders received by 5.30 pm; express am and Saturday services available
- Hardware carefully handled and delivered safely and reliably by caged, insured, top name courier service
- Pre-despatch testing on Amiga systems
- Free 30 day courier collection and delivery of NEW replacement.(except product with on-site maintenance)
- Hotline support and in-house engineers
- Upgrade and trade in offers to keep you up to date
- Exceptional after sales service
- BFPO and export welcome

NOT JUST ANOTHER MAIL ORDER COMPANY

For years a major player in Amiga Mail Order, Hobbyte also boast extensive expertise and experience in specification and support of multi-machine and specialist systems. Hobbyte have been recommended and trained by Commodore and successfully won major orders and support contracts from London Boroughs, MOD, educational establishments etc. We are pleased to be placed on tender lists. This expertise is available to all our customers.

• AMIGA SPECIALISTS • STAR GOLD DEALER • CDTV CENTRE • PHILIPS APPOINTED DEALE[R]

MONITORS/ACCESSORIES

CBM 1084SD + leads + 2 games	188.99
Philips UK 8833 MKII mon.+leads + on-site	199.90
Tilt + swivel stand for 8833	12.99
CBM 1940 dual sync .39 dpi AGA monitor + speakers	269.99
CBM 1942 dual sync .28 dpi AGA monitor + speakers	339.99

MICROVITEC CUB-SCAN 1440 14" .28dp for 1200/4000, in-finately variable scan rates between 15KHz (default on boot-up) and 40 KHz for all AGA modes in this range. With tilt and swivwl stand. **"CUA BEST BUY"** ...399.99

Microvitec Cub-scan .28dp for 1200/4000 as above, but 20"	1039.99
Microvitec Cub-scan .1782, 17", .27dp, 29-82 KHz horiz. scan	889.99
Adaptor for A1200/Microvitec	29.99
EIZO 9060M Multi-Sync for 1200/4000 models	595.00
CBM 1936 Hi-res SVGA .28dp inc. tilt & swivel	259.99
NEC 4FG Multi-Sync	544.99
Philips Brilliance 2110 21"	1790.90
PiP View TV tuner+remote with sub picture for monitors	113.99
Zy-Fi Speakers	37.90
Zy-Fi Pro Speakers	57.90

FLOPPY DRIVES

Zydec 3.5 external drive, daisychain + on/off	51.50
Cumana CAX 354 3.5 external drive, beige	56.50
PC 880B with anti click + Blitz back up and virus protector	59.90
PC 880B as above, Cyclone compatible	64.99
Dual drive as PC 880B	124.99
High density 1.76MB ext. drive for any Amiga (WB 2)	98.50
High density 1.76MB ext. drive for any Amiga (WB 2) + 10 HD Discs	104.95
Power HD internal floppy for 1500/2/3 4000	94.90
Power HD internal floppy for500/600/1200	94.90
A500 replacement internal floppy	64.99
A600/1200 replacement internal floppy	69.99

HARD DRIVES/ACCELERATORS

1500/2000

GVP HC8/II 40MB	196.99
GVP HC8/II 80MB	289.90
GVP HC8/II 120MB	374.90
GVP HC8/II 213MB	479.90
G Force 030 25MHZ 1MB	384.99
G Force 030 40MHZ 4MB	684.99
G Force 030 50MHZ 4MB	984.99
G Force 040 33MHZ 4MB	1284.99
Extra 2MB for above	POA
Trifecta SCSI 80MB HD	234.90

3000/4000

Fastlane SCSI II controller for 4000	299.90
DKB 40981 SCSI II	269.99
Syquest 44MB internal	289.90
Syquest 88MB internal	359.90
Spare Syquest 44MB cartridge	69.50
Spare Syquest 88MB cartridge	99.50
A4000 130MB	159.99
A4000 170MB	169.99
A4000 214MB	199.99
A4000 260MB	229.99
A4000 340MB	329.99
A4000 450MB	439.99
A4000 525MB	599.99
Self fitting - fitting by our engineers ADD	£15

500

A530 1MB 40MB	392.00
A530 1MB 80MB	489.00
A530 1MB 120MB	589.99
A530 1MB 213MB	693.99
A530 68882	218.99
GVP HD8 42MB	194.90
GVP HD8 80MB	296.99
GVP HD8 120MB	394.99
SOME HD8 REFURBS AVAILABLE	FROM £169
A590 20MB	199.99

A500 Internal 20MB HD	184.99
A500 Internal 60MB HD	249.99
A500 Internal 80MB HD	279.99
A500 Internal 120MB HD	339.99
Trifecta SCSI 80MB HD	289.99
A570 for 2.04 1MB 500	98.90

A600/1200

GVP 85 MB HD 600/1200	274.99
GVP 1230 030 accel for 1200	239.90
GVP1230/40MHZ/4MB 68882 Co-Pro for 1200	479.99
M1230 XA 40MHz	269.99
M1230XA 40MHz 4MB	429.99
M1230 XA 50MHz 4MB	519.99
Microbotics VXL30 25MHz	219.99
VXL 30 40MHz	339.99
2MB Burst RAM for above	179.99

A600/1200 HD UPGRADES

	SELF FITTING* (on-site invalidated)	CBM APPROVED FITTING** (with on-site)
20MB	85	-
40MB	139	-
60MB	175	199
80/85MB	179	249
120/127MB	215	329
240/250MB	349	499
INTERNAL CLOCK		POA

*with cable & disc ADD £14.99 for Hobbyte fitting
**Including FREE courier collection & delivery

1200 OVERDRIVE EXTERNAL HD's

Overdrive 35 40MB HD	187.50
Overdrive 35 80MB HD	247.50
Overdrive 35 170MB HD	317.50
Overdrive 35 220/260MB HD	337.50
Overdrive 35 340MB HD	417.50
Overdrive 35 540MB HD	POA

AMIGA 24 BIT HARDWARE

TOASTER COMING SOON!

DCTV	376.99
GVP IV + VIU-S	965.99
GVP IV + VIU-CT	1255.99
Impact Vision 24	POA

HARLEQUIN 32 BIT FRAMEMAKER BOARD

- 16.7 million colour photo realistic display • real time 24 bit animation
- Optional Alpha Channel - superimpose high quality graphics onto live signal, or smoothly blend paint images • Optional Double Buffering - 2, 24 bit displays instantly available

SUPPORTS: TV Paint, Vlab, Calligari, Sympatica, Ad Pro, Real 3D + others

H1500 1.5MB	£929
H2000 2MB + Alpha	£999
H3000 3MB +D/Buffer	£1099
H4000 4MB + Alpha +D/Buffer	£1279
Genlock	£199
*H2000 Plus	£1479
*H4000 Plus	£1579

FREE V lab Framegrabber with Harlequin Plus

*Plus versions inc. Genlock, extra screen resolutions + modes, 4 Alpha Chanel + more

AMAZING PRICE!

PICASSO 24 BIT GRAPHICS CARD + FREE Personal Paint Card Lite ... **£324.99**

PICCOLO 24 BIT GRAPHICS CARD
16.7 million colours, on-board blitter, IMB exp to 2MB video RAM, fully programmable resolution, double buffering + multiple screen + AREXX. support. Supports leading graphics packages/applications. With FREE TV Paint Jnr ... **£379.99**

RAINBOW III 24 BIT GRAPHICS CARD + VIDEO CONTROLLER ... **£1489.99**
Similar to Piccolo but with 4MB video RAM, programmable resolution to 1600 x 1280, built -in video controller inc. 110MHz clock. With FREE TV Paint Jnr.

PEGGY MPEG VIDEO CARD ... **£479.99**
Take 24 bit animations from disc or other storage devices and replay in real-time through the Amiga! Use integrated genlock to overlay Amiga graphics for sophisticated titling and special effects, to produce stunning promotional/training videos, or games with live video footage. Near SVHS quality, 16.7M colours, MPEG tools + library functions, 25 frames/sec playback.

YC Output module for Peggy	£129.99
MPeg encoder option for Peggy	£349.99

OPAL VISION (for 3000/4000)
24 bit board v2+ Opal Paint, Opal Presents, Opal Hotkey, Opal AminMATE ... 589.99
ALSO WITH IMAGINE SOFTWARE
IF YOU HAVE PURCHASED OPALVISION, YOU MAY HAVE RECEIVED VOUCHERS AGAINST THE FOLLOWING NEW PRODUCTS., WHICH WILL BE ACCEPTED BY HOBBYTE IN PART PAYMENT

Video Processor for Opal Vision WITH VOUCHERS	647.99
Video Suite for Opal Vision WITH VOUCHERS	647.99
Scan Rate Converter for OpalVision WITH VOUCHERS	647.99
Retina 24 bit graphics card + 1MB + VD Paint	329.00
Retina 24 bit graphics card + 2MB + VD Paint	395.00
Retina 24 bit graphics card + 4MB + VD Paint	489.00
V lab 24 bit real time digitiser 1200/600/500 ext	334.99
V lab 24 bit real time digitiser 1500/3000/4000 int	289.99
V Lab 4000/3000 int SVHS	334.99

FREE V lab Framegrabber with Harlequin (see above)

EMULATION

G Gate 386sx 25MHz	386.99
GVP 286 for GVPII +530	146.99
GVP 40/4 for 1500	945.99
AT Once	214.99
386 Bridgeboard	199.99
486 Bridgeboard	299.99
Emplant	245.90
Emplant Deluxe	339.90

SCANNERS & DIGITISERS

Epson GT 6500, 600dpi 24 bit A4 inc. Scan s/w	779.00
Epson GT 8000, 800dpi 24 bit A4 inc. Scan s/w	1099.90
Power Hand Scanner, 400 dpi, 64 Greyscale, Powerscan software	88.99
Power Hand Scanner as above, V3 for 1200/4000	104.99
OCR software for Power Scanner	48.50
Power Colour Hand Scanner	219.49
Sharp JX 100 A6 Scanner + scanlab s/w up to 18 bit	469.99
Summa Sketch II A4 with s/w/A3 Tablet Digitiser	359.99/529.99

GENLOCKS/MODEMS

Rendale 8802 (1200 compat)	139.99
Rendale 8802 FMC	159.95
Rendale 8802 SVHS/8860	469.99
Hama Genlock 292	283.90
Hama Genlock S290	689.99
GVP G-Lock	283.90
Video Pilot v330	1094.94
Rocgen+ 1200 compat	158.50
Rocgen Rockey	119.50
Supra 2400 Modem	78.95
Supra Fax Modem	148.90

SUPRA 2400+ FAX/MODEM
With 9600 Fax, 2400 Data Fax Software, Atalk 3 Comms S/W, Modem Leads & Power supply ... **£148.99**

SUPRA 14440 FAX/MODEM
As above, but up to 14,400 Fax/Data ... **£279.00**
Rocgen plus Rockey Bundle ... **£239.90**

ACCESSORIES & DISCS

A500/600/1200 printer centre	28.99
A500/1200 control centre	34.90
A600 control centre	27.90
Brickette CDTV Joystick adapt.	39.99
10 Blank DS/DD discs in box	4.99
10 Blank DS/HD discs	6.99
A520 Modulator	29.99
Alien/Batman/T2 Joystick	10.99
Bug Joystick	11.99
CDTV Keyboard	54.99
Zy-Fi Speakers	37.90
Zy-Fi Pro Speakers	57.90
50 Blank DS/DD discs	17.99
50 Blank DS/HD discs	27.99

EXPANSION

A500 512k Ram Exp+Clock	21.99
A500+ 1MB exp	29.99
A500+ 2MB, exp. to 8MB	149.99
A601	37.99
A600/1200 2MB exp (card)	137.99
A600/1200 4MB exp (card)	169.99
CDTV 1MB exp + Super Agnus	157.99
A500 Rom Sharer 1.3	37.95
A500 Rom Sharer 2.04	38.95
A600 Rom Sharer + 1.3	49.95
A2065 Ethernet Card	229.95
Blizzard 1200 4MB	159.90
Blizzard 1200 8MB	299.90
Blizzard 1200 4MB 25MHz	299.90
Blizzard 1200 4MB 50MHz	POA
PC 1208 bare	55.90
PC 1208 2MB	137.90
PC 1208 4MB	214.90
PC 1208 8MB	396.90
MBX 1200 bare	54.90
MBX 1200 2MB	134.90
MBX 1200 4MB	194.90
MBX 1200 8MB	379.90
68882 25MHz for MBX/1208	79.90
68882 50MHz for MBX/1208	159.90
CBM 2.1 upgrade kit	74.99
Amitec 16bit 0MB exp for 1200	76.90
Amitec 16bit 4MB exp	POA
Chip fitting and board upgrade avail., by our qualified engineers	POA

PRINTERS

2YR WARRANTY WITH CITIZEN

	ALONE	WITH STARTER PACK
Citizen 120+D	111.99	ADD £12.99
Star LC20	119.90	
Citizen 90 mono*	144.49	
Citizen 90 colour*	154.49	
Citizen 124D	176.99	
Star LC 100 9 pin col	149.99	
Panasonic KXP2180 col	159.90	
Star LC200 col	184.99	
Star LC 24-20 II	218.49	
Star LC 24-100 24 pin	173.49	
Star LC 24-200	209.99	
Star LC 24-200 col	248.49	
Panasonic KXP 2123 col	209.99	
Epson LQ 100	179.99	
Epson LQ 570	259.90	
Epson LQ 870	469.90	
Epson LQ 1170	569.90	
Citizen S200 24*	184.99	
Citizen S200 24 col*	199.99	
Citizen S240*	187.90	
Citizen S240C col*	233.90	
Citizen S24x col*	325.90	
Star LC24 - 30 Col	218.90	
Star LC24 - 300 Col	275.90	
Citizen col Note. Printer III	POA	

Welsh Character Set available on request for Citizen Swift 90,200 & 240

UNBELIEVABLE INKJET PRICES!!	ALONE	WITH STARTER PACK
HP Deskjet Port.	249.00	ADD £12.99
Epson Stylus 800	239.90	
Citizen Projet II	228.90	
HP Deskjet 510	249.90	
HP Deskjet 500col§	295.90	
HP Deskjet 550C§	495.90	
HP Deskjet 1200C	1249.90	
Canon BJ10SX Port	189.99	
Canon BJ 200 (WITH FREE SHEETFEEDER)	295.90	
Canon BJ 230 A3	339.90	
Canon BJ 330 A3	449.90	
Canon BJ 300	359.90	
Canon BJC 600 Col	559.90	
Star SJ 48	198.99	
Star SJ 144	519.90	
LOWEST PRICE LASER QUALITY OKI OL 400e LASER	509.90	
CITIZEN LASER 6000	POA	
Panasonic KXP 4410	539.90	
Panasonic KXP 4430	689.90	
Star LS 5 laser	569.90	
HP Laserjet 4L	569.90	
HP Laserjet 4	1289.90	
Star LS 5ex 5ppm 2 bin	659.90	
Sharp JX 9500 9ppm	599.50	

PRIMERA COLOUR PRINTER
If you've admired the saturated colours of the Mitsubishi and other thermal wax printers at exhibians, but couldn"t afford the £4000+ price tag, the Fargo Primera is the printer you're looking for. Less than a third of the price of the nearest rival,
Primera offers:
- Photo-quality, rich bright colours
- Cost per page less than ink jet.
- Up to 4 times faster than ink jet
- A4, transparencies + T-shirt transfer paper printing

Complete with Amiga driver (Windows or Mac driver if preferred) and Amiga lead. ... **£689.90**

§Studio driver/Utility (WB 2 & above) highly recommended ADD £39.95

STARTER PACK: 500 Sheets A4 paper, Amiga to printer lead, Universal Printer Stand & Driver * with Print Manager

SOFTWARE

GRAPHICS/CAD

Aladin 4D	213.99
AmigaVision	17.90
Art Expression AGA	134.90
Art Dept. Pro 2.3A	134.90
AdPro Prof Conversion	48.99
Brilliance	133.90
SPECIAL £140 OFF Caligari 24	94.90
Caligari Broadcast 3	396.90
Cine Morph	29.99
Deluxe Paint IV	53.99
Deluxe Paint AGA	62.99
Disney Animation	56.90
Distant Suns	49.49
Essence	44.50
Expert Draw	39.90
Gallery	39.49
Image FX V1.5	187.90
Imagine v2	149.99
Image Master AGA	139.90
IntroCAD Plus	63.99

Morph +, top of the range package at £138.99, Cinemorph at £24.99 (RRP 49.99)

Pixel 3D Pro	119.95
ProDraw 3	68.50
ProDraw 4 AGA	POA
Real 3D Classic	78.90
Real 3D v2	394.90
Scala 500 HVT	64.49
Scala Pro MM210	137.90
Scala MM200 Supp. AGA	274.99
Scala Pro MM300 AVAIL NOV	322.90
Sculpt Anim.4D	198.99
Spectra Colour	57.99

SYMPATICA II
Do your animations slow down in real time? SII will turn them into smooth 25 frames/sec masterpieces. Also 24 bit Rotosope video is frame accurately digitised, modified + re-recorded - inc deck controller h/ware ... 329.99
Software only ... 189.99
Take 2 ... 36.90

TV Paint 24	249.90
TV Paint Junior	179.99
Vista Pro 3	49.99
Vista Makepath	24.99
X CAD 2000	90.50
X CAD 3000	249.99
X CAD 2 to 3 upgrade	149.99

VIDEO PROD/ TITLING

A Video + TV Paint V2	588.90
Adorage	48.50
AmigaVision	17.90
Broadcast Titler II	173.90
NEW-Broadcast Titler AGA Super High res	239.90
Broad T Font Enhancer	POA
Broad T Font Pack	POA
Deluxe Photolab	51.49
imagemaster	159.99
Montage 24 AGA -titling + grahics for Opal Vision and Impact Vision	POA
Morph+	138.99
Pro Video Plus	137.99
Scenery Anim 4	£57.99
Scroller	59.99
TV Record	189.99
TV Show Pro	51.39
TV Text Pro	79.50
Video Studio 3	115.95
Video Director	118.90
Video Effects 3D	POA
Video Master	49.49
Vidi Amiga 12 V2	74.50

VIDI OFFER - Vidi Amiga 12 with Megamix Master ... £97.90

Vidi 12 Real Time	154.99
Vidi 24 Real Time	222.90

Video Timelapse VTL - creates stunning timelapse sequences - flowers opening, clouds, with sophisticated light/ motion etc., record trigger inc. deck controller h/ware ... 329.90
Software only ... 189.99

EDUCATIONAL

Any Fun School 3 or4	15.99
Any ADI	16.99
Merlin's Maths	16.99
Paint & Create	16.99
Spelling Fair	16.99
Any Noddy	16.99

See also software packs

UTILITIES/LANGUAGES

AMAX II Plus	249.99
Ami back	39.90
Ami back Tools	39.39
Amos 3D	21.49
Amos the Creator	30.95
Amos Compiler	19.49
Amos Prof.	32.99
Amos Prof. Compiler	24.99
Easy Amos	22.49
Blitz Basic 2	49.90
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continued from page 48

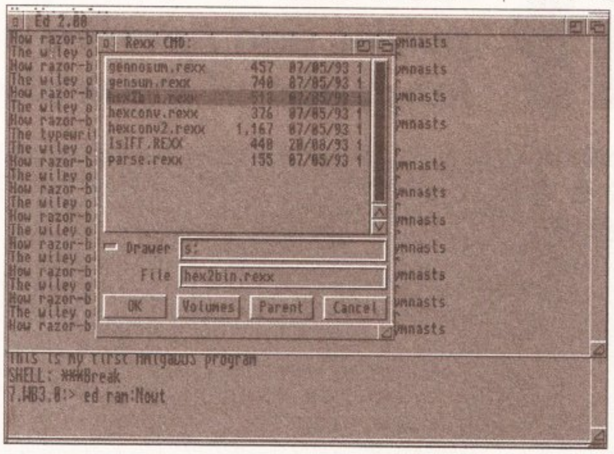
Two extended commands are used to get around these deficiencies. Close *ED* and re-open it with a different filename so you have a blank screen. Now set the margin guides to 20 and 50 as before and type enough text to make the editor wrap. Now use the join command, **<Esc>-J** to join the two lines together: an uncomfortable solution. If you can predict when a line is about to wrap you can defeat the margin guides for the current line with the extend command, **<Esc>-EX**. This allows you to enter the entire line in one go without being troubled by word wrap.

ED WITH AMIGADOS 2

AmigaDOS 2 users will notice *ED* also has menu functions and can be operated (to some extent) using the mouse. For instance, you can click the mouse at any position you want the cursor to appear at and you can use console copy and paste to move text blocks around. Let's try that now. Open your *ED* window and enter the following program:

```
LAB start
ECHO "Hello world"
ECHO "This is my first
AmigaDOS program"
SKIP start BACK
```

1. Click the mouse on the "**E**" in **ECHO** in the second line of the program – you will notice the cursor moves from the first line to the place where you clicked.



Version 2 has mouse support, so you can select text just by clicking on it. It's supposed to support ARexx too – but how?

2. Now hold down the mouse button and move the pointer to just after the closing quote in the third line. As you do so you will notice how an area of text is highlighted: white on blue with the default palette. The first character in the selection (the current cursor position) is shown "banded" to indicate the cursor and highlight together.

3. Hold down the right **<Amiga>** key and press **C**. This action copies the current selection to the internal clipboard. Release both keys. This sequence is, incidentally, part of the standard style guide: all programs should use this sequence to copy something to the clipboard, although (sadly) many do not.

4. Position the pointer over the "**S**" in **SKIP** and click once to move the cursor to that position. Now press **<Return>** to open a blank line above the current one.

5. Move the pointer to the start of the blank line and click once more. Now, while holding the right **<Amiga>** key, press **V**. The text block you have just copied is "pasted" back into the document. It's worth mentioning here that console copy and paste works by simulating key presses and is not part of *ED*. For this reason it is not possible to have a "cut" facility as you might find in a word processor. Also, this method is quite slow, but it's a lot faster than re-typing the whole lot again.

PASS THE PORT

In AmigaDOS 2 and higher, *ED* has an ARexx port. In theory this means you should be able to write simple ARexx programs to control it just as you would any other program. At this moment in time though, no documentation exists to say what *ED's* ARexx commands are! However, it is worth noting that provided the ARexx master process is running, you can execute an ARexx script as an extended command, that is, **<Esc>-Arexx.Command**.

Next month, I'll be looking at *ED* and simple scripting in more detail. Until then you might like to try experimenting with the list of *ED* commands described in the reference panel below.

CALL ME!

If you have a problem with any aspect of AmigaDOS, please write to me at *Amiga Shopper* or, if you have a modem, contact me directly via CIX as **smidoid@cix.compulink.co.uk**. I'm here to help! AS

ED COMMANDS (ALL VERSIONS)

Movement Functions

<Ctrl>-D:	Move up one page.
<Ctrl>-E:	Go to top or bottom of page.
<Ctrl>-I:	Cursor to next tab stop.
<Ctrl>-R:	Cursor back one word.
<Ctrl>-T:	Cursor forward one word.
<Ctrl>-U:	Move down one page.
<Esc>-B:	Bottom. Move directly to the end of the file.
<Esc>-J:	Join. Merge the current line with the line below it.
<Esc>-S*:	Split. Break the current line at the cursor.
<Esc>-T:	Top. Go to the top of the file.
<Esc>-CE*:	Cursor to End. Move the cursor to end of line.
<Esc>-CL*:	Cursor Left. Move the cursor left one character.
<Esc>-CR*:	Cursor Right. Move cursor right one character.
<Esc>-CS*:	Cursor to Start. Move cursor to start of line.
<Esc>-M[n]:	Move. Go to line **[n]**.
<Esc>-N*:	Next. Go to start of next line.
<Esc>-P*:	Previous. Go to the start of the preceding line.

Layout

<Esc>-EX:	Extend. Remove the limit on the right margin.
<Esc>-SR[n]:	Set Right. Set right margin (word wrap) at **[n]** characters.
<Esc>-SL[n]:	Set Left. Set the left margin at **[n]** characters.
<Esc>-ST[n]:	Set Tabs. Position phoney tab stops at **[n]** characters apart.

Editing Functions

Backspace:	Delete the character immediately behind the cursor.
DEL:	Delete character under cursor.
<Ctrl>-A:	Insert a new line.
<Ctrl>-B:	Delete a single line at cursor.
<Ctrl>-G:	Repeat last escape command.
<Ctrl>-O:	Delete the word to the right of the cursor.
<Ctrl>-Y:	Delete from cursor to end of current line.
<Esc>-A/text*:	After. Insert "**text**" after the cursor position.
<Esc>-D*:	Delete. Remove the current line
<Esc>-DC*:	Delete at Cursor. (As **DEL**.)
<Esc>-I/text*:	Insert "**text**" at the cursor.

Block Commands

<Esc>-BE:	Block End. Mark the end of a text block.
<Esc>-BS:	Block Start. Mark the first line in a block.
<Esc>-DB:	Delete Block. Delete the currently marked block.
<Esc>-IB:	Insert Block. Copy the currently marked block to the current cursor position.
<Esc>-SB:	Show Block. Position the current block at the start of the window.
<Esc>-WB/file:	Write Block. Save the current block to file.

Search and Replace

<Esc>-BF/text:	Backwards find. Search for text backwards in file.
<Esc>-E:/ab/cd:	Replace one instance of "**ab**" with "**cd**".
<Esc>-EQ:/a/b:	As **<Esc>-E** with confirmation.
<Esc>-F/text:	Find. Locate the next instance of "**text**".
<Esc>-LC:	Letter Case. Make searches sensitive to case. In other words, "**ABC**" <> "**abc**".
<Esc>-UC:	Ignore Case. Make searches case independent. So now, "**ABC**" = "**abc**".

File Commands

<Esc>-IF/name:	Insert File. Insert text from the file "**name**". Full path may also be included.
<Esc>-Q:	Quit. Leave *ED* and return to caller without saving.
<Esc>-S:	Save. Save all current file and continue editing.
<Esc>-SA/name:	Save As. Save current file on disc as "**name**".
<Esc>-U:	Undo. Revert back to the last version of the line after editing. Note that this does not undo deleted lines or blocks!
<Esc>-X:	Exit. Save current file, quit *ED* and return to caller.

* These commands are intended for *ED's* macro language although they can be executed directly.

ARexx: read all about it

Alex Gian rounds up all the guides and tutorials on the language of the Amiga's future.

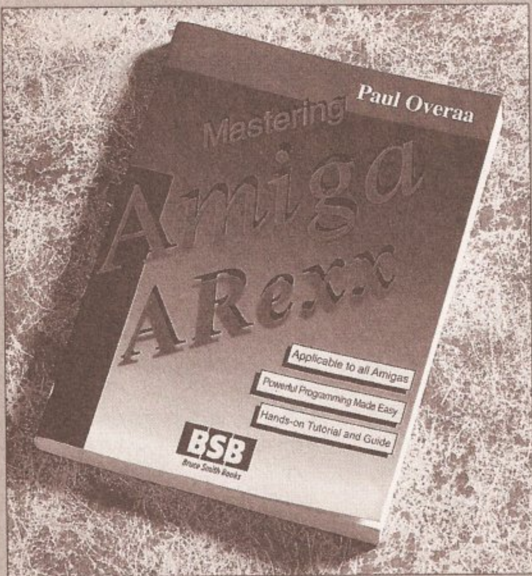
MASTERING AMIGA AREXX

The latest title to hit the bookstores is *Mastering Amiga ARexx* by Paul Overaa, published by Bruce Smith Books as part of their extensive *Mastering Amiga* series. At £21.95 it is among the cheapest of the books available and I suspect it will also be the most popular. It's nice to see a book on ARexx by a British author. Paul is one of the most prolific writers on Amiga programming and is a regular contributor to *Amiga Shopper*. His work is usually meticulous and he has always taken great pains to help newcomers to the Amiga programming scene, so I was looking forward to this book.

The book is just over 300 pages long. Of these, the first 220 or so take you through the language itself. You start off with an introduction to the basics of ARexx operation, followed by a description of the elementary ARexx commands, functions and control structures. While this part of the book can serve as a reference section, it is no dull technical list; everything is illustrated with relevant examples and they will not baffle the beginner.

The author also gives several style tips which will save you much hassle later on if they are followed. The more specialised parts of ARexx, like the parsing templates, the compound symbols, and the debugging system, have special chapters devoted to them later on in the book.

After this the basic ideas are brought together in some example programs – and here I found some touches that I really liked. ARexx's input and output are essentially text-based, which may disappoint those who are used to the Amiga's requesters and mouse operation. (Even though you can use Intuition with ARexx, it is an operation for more experienced programmers.) Newcomers are restricted to text-only CLI-based operation. So it's nice to provide the user with the ability to brighten up the text (for instance, using colours and italics) and also to have instant keyboard response (instead of having to type Enter after everything). The author does this by providing decent explanations of AmigaDOS RAW: windows and ANSI text control codes. These subjects are not directly part of ARexx so they are not often found in books, but they are essential for ARexx beginners.



Continuing the popular "Mastering Amiga" series from Bruce Smith Books, it's Mastering Amiga ARexx.

For those interested in the principles of correct program design, there is also a section on structured programming theory. It deals with questions of writing manageable/sensible/structured programs and describes the use of Warnier diagrams in order to achieve a good design – irrespective of the language used. Paul thinks this is quite important and has also included it in his other programming books like *Mastering Amiga C*.

Finally, he goes through a few non-trivial programs which will give some grounding and experience in real ARexx programming.

The last 100 pages of the book are dedicated to the sections that explain inter-process communications and the internal structure of ARexx for interface programmers. There are also a few useful appendices.

The section on inter-process communications is not very long, only some 17 pages, but it manages to cover all the essentials of ARexx command host interfaces. Examples are given for ARexx control of the *OctaMED* sequencer, a few other music programs and some text processors. The (rarer) function host interfaces are not really dealt with.

The section on the internals of ARexx is more than enough to give you a basic idea of how to build a simple ARexx interface. Besides, by the time you need more than this you will have graduated way past the scope of this book.

However, the book also has a few negative points that cannot be ignored. First of all, several of the ARexx functions are not covered at all; instead the reader is referred to the "official" ARexx documentation. These include important functions like **Strip** (for removing characters), **Time** (the system timer), **Pragma** (for changing the working directory), and **Translate** (for character substitutions) – about 16 functions in total. Great! I've just bought this book in order to make up for Commodore's appalling lack of documentation, only to find out that my troubles have not yet ended...

Much as I appreciate Paul's work I think that this kind of thing is a fairly major oversight. Sure, these functions also have some complex uses, but they do deserve at least an outline explanation. The **rexxsupport.library** is also not covered. Since it's a part of the full ARexx distribution, and has several useful applications, it should at least be mentioned. If you want to use it you will have to get your own documentation, or glean the information you need from the PD examples supplied on the accompanying disk. Another oversight, I think.

Other than that, my complaints are few. It is definitely the best all-rounder, providing adequate material for the total beginner, but also catering for the intermediate user who already has some programming background. The disk available with the book contains the usual PD stuff and the examples from the book. Even though the author claims that this is an introduction to ARexx, I think it will cover the needs of almost all users other than the most advanced programmers.

SHOPPING LIST

Mastering Amiga ARexx ..£21.95
Paul Overaa
ISBN: 1-873308-13-2
Paperback – 320 pages
From: Bruce Smith Books, PO Box 382, St Albans AL2 3BR
☎ 0923 894355

CHECKOUT MASTERING AMIGA AREXX

Usefulness for beginners
●●●●●●●●○○
Good tutorials, and very sound advice. Covers important areas sometimes ignored by other books.

Usefulness – advanced
●●●●●●●○○○
Will aid experienced programmers wishing to design ARexx interfaces.

Comprehensiveness
●●●●●●●○○○
Very good, though it's a shame about some of the oversights.

Value for money
●●●●●●●●●○
Best available at the moment.

Overall rating
●●●●●●●●○○
Definitely the best all-rounder of the lot. Should be very popular with the Amiga-owning book-buying public.

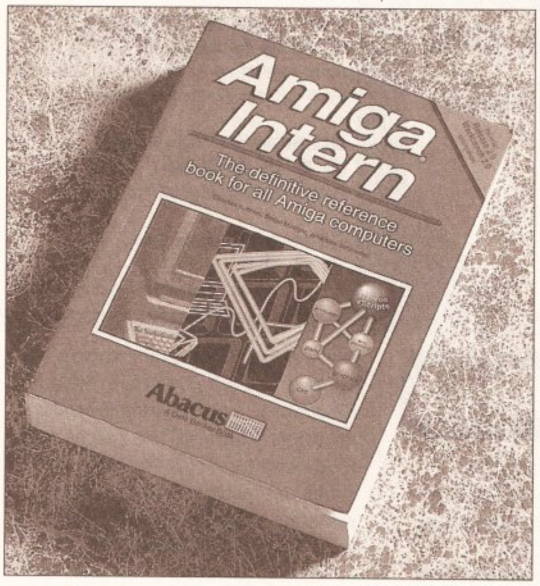
AMIGA INTERN

Here is a bit of an unusual book – there is nothing, either in the title, or on the cover to indicate that it is a book on ARexx. In fact, it is a rather large reference book dealing with a variety of subjects related to Amigas, including the newer developments. I am not sure if it was originally intended as a book for A3000 owners, or whether it was aimed at all Kickstart 2.0 users, but whatever its intentions it has turned out well.

This was quite a surprise for me – I was expecting to see the usual hodge-podge that comes out when books are compiled as collages. As it turns out, however, the book is well-thought-out, and covers most of the subjects that cannot be found in older publications (Workbench 1.3 and before). For the more technically adventurous users, it could actually be the best choice when shopping for an ARexx manual!

It's 1,000 pages long, and divided into 11 chapters. Although this is much bigger than *Using ARexx on the Amiga*, you do not get the impression that space has been padded out just to fill the pages. Even though ARexx makes up only 20 per cent of the book by volume, it is still the subject of 7 out of the 11 chapters. They are crammed with information, more than some other books can fit into 500 pages. Both of the Abacus publications are very good on detail and do not leave the glaring gaps found in some other titles. For instance, the **rexxsupport.library** (so often ignored) is fully explained. However, *Amiga Intern* goes even further, explaining the internal structures of ARexx with all the details needed to build ARexx interfaces in other languages, like C.

The other four chapters of the book are dedicated to: Workbench 2.x; complete descriptions of all the Amiga Libraries, Devices (including the new features of the version 2.0 operating system, for example the ASL file requesters, the IFFParse library, commodities and so on); full Amiga hardware info; and the Amiga A3000. There is no coverage of Workbench 3.x or AGA graphics.



Don't be misled by the title, or all the other technical content – this is an excellent ARexx reference guide.

This book would be more suitable for people who are not newcomers to the Amiga. Although it does have an introduction on ARexx, and the basics are well covered, there is none of the hand-holding found in the other three books. Total beginners would probably get much more out of *Using ARexx on the Amiga*, or *Mastering Amiga ARexx*.

On the other hand, this is the most complete description of ARexx available in any book except for the official documentation. It will also appeal to programmers who already own some of the older Amiga documentation (like the old Workbench 1.3 *ROM Kernel Manuals*), and who need a stopgap before buying the v2.0 *RKM*s. Even better, it can save you buying the v2.0 books altogether while waiting for the release of the v3.0 *RKM*s. Finally, *Amiga Intern* will be useful to anyone who wants to be a little more ambitious with ARexx and hook it up to the newer WB 2.0 features.

At £36.95 it is not cheap, but it could well be worth it, especially as it covers so many other new features besides ARexx. The only thing that really stops me from recommending it as a definite "must buy" is the lack of information on the A1200-A4000 series.

SHOPPING LIST

Amiga Intern **£36.95**
Kuhnert, Maelger & Schemmel
ISBN: 1-55755-148-0
Paperback – 950 pages
from: Abacus,
Computer Bookshop
☎ 021-706 1250

CHECKOUT AMIGA INTERN

Usefulness for beginners
●●●●○○○○○○
Even though all the information is there, this book might "frighten" a new or inexperienced user.

Usefulness – advanced
●●●●●●●●●○
Outstanding. All sorts of subjects covered in depth.

Comprehensiveness
●●●●●●●●●●
Along with an excellent ARexx text, you get a full Amiga reference book too! What more could you ask for?

Value for money
●●●●●●●○○○
Pretty good, all things considered.

Overall rating
●●●●●●●●○○
An excellent book for the technically-oriented Amiga fan.

THE AREXX COOKBOOK

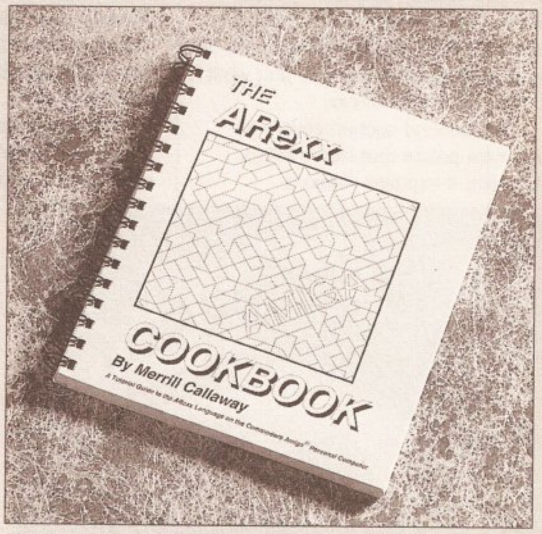
And now for something completely different... A book that actually does not claim to be a complete solution! The author makes it quite clear, right from the outset, that this is a supplementary book which must be used with some other documentation. As the title suggests, it is meant as a workbook, or trainer, to get you into ARexx programming through a guided, hands-on tour of a selection of interesting and varied ARexx programs. It is presented in a wire-spiral binding on heavyweight glossy paper – like some of the better software manuals.

I would have liked this book a lot more were it not for its unfortunate bias. It comes from the United States and it has a definite American vibe which could alienate some British readers. For instance, it is peppered with cross-references to the official Commodore ARexx documentation, and the Bill Hawes' (official) distribution manual, neither of which are particularly common on this side of the pond.

Having said that, you can use *The ARexx Cookbook* as a companion book with any ARexx documentation. Even if you only have a list of the ARexx commands and functions, the book is still quite usable – you will probably make your own cross-references as you progress through the text.

It also makes certain quaint assumptions, for instance that large numbers of Amiga users have got PostScript laser printers. This may be so in the USA, Mr Callaway but it is still a bit in the future for the rest of us. Also some of the programs mentioned, for instance the (very good) *TurboText* editor, are more common in the States and Canada.

Nevertheless, through its practical approach, this book is an excellent introduction to the possibilities that ARexx offers, especially in terms of simple programming tasks. It concentrates on harnessing the machine's computational power as easily as possible. For instance, two of the examples supplied tackle some rather classy puzzles and arrive at the results through extensive computer proof. Several techniques, including recursion and the use of random numbers, are illustrated along the way. You may still not understand the theory at the end, but you will have the proof and the result that you want. I've always preferred this practical approach.



You'll need another reference work to be able to make best use of the many recipes in The ARexx Cookbook.

Some people call this the "quick and dirty" method and feel that it can lead to sloppy programming. ARexx's flexibility allows you to be as sloppy or as neat as you like and this is part of its charm. However, I

continued on page 56

continued from page 55

think that the ability to get a job done (especially by comparatively non-technical people) far outweighs technical niceties. People who become really interested in programming will have plenty of opportunities to deal with the technicalities. Besides, nothing gets people more interested in computing than succeeding at tasks that seemed difficult at first. To his credit the author captures this spirit of getting-the-job-done with ARexx.

All the other ARexx basics, like parsing, compound symbols, and so on are dealt with in a clear, positive and enthusiastic manner. However, the author does not deal much with ARexx-AmigaDOS co-operation, and slightly more advanced topics are not covered at all. For instance he describes an ARexx program to sort a list. This is great for demonstrating and teaching the language, but in real life this program would be far too slow for larger lists. I use my fast AmigaDOS "sort" command for jobs like this and then I feed the result back to ARexx. These sort of tricks are not covered as I would expect them to be in a book of ARexx recipes.

Inter-process communication has been well explained and the author has included some useful scripts for commercial products, including the popular *ADPro*. If you are using a text or graphic processing package with an ARexx interface and you want to know how to get more out of it, you could do a lot worse than this book.

Of the two program disks included the first contains the code found in the book, plus some useful ARexx add-ons including the **rexxarplib.library** which permits the use of windows, menus, and so on with ARexx. The second disk contains some examples of working with PostScript, a script to create indexes from documents and a couple of small scripts for commercial programs.

SHOPPING LIST

The ARexx Cookbook £21.95
(includes two program discs)
Merril Callaway
ISBN: 0-9632773-0-8
Paperback – 250 pages
From: Premier Vision, 31C Herne Hill Road, London SE24 0AX
☎ 071-274 4407

CHECKOUT
THE AREXX COOKBOOK

Usefulness for beginners
●●●●●●●○○○
Good tutorial value. The tone of this book is more fun than technical.

Usefulness – advanced
●●●●●●○○○○
Patchy, but some good tips here too.

Comprehensiveness
●●●○○○○○○○
It's not meant to be very comprehensive.

Value for money
●●●●●●●○○○
Reasonable, though once again penalised by the exchange rate. Still, the price does include two disks.

Overall rating
●●●●●●○○○○
More of a luxury than a necessity, but good fun to have in your Amiga reference library anyway – it could make an excellent gift.

USING AREXX ON THE AMIGA

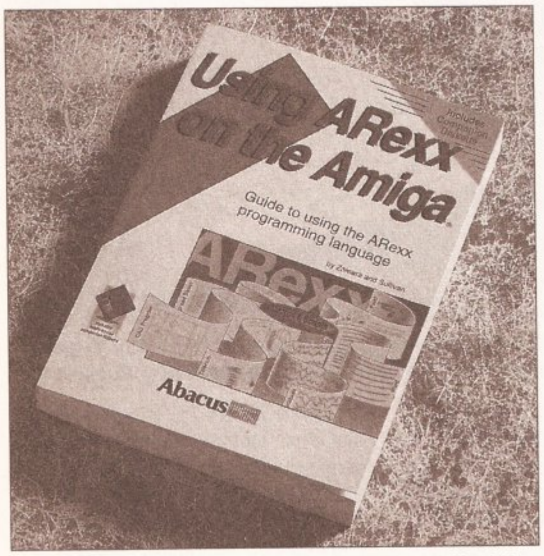
This was the first book on ARexx to appear on the bookshelves and for a while there wasn't really any other choice. It is intended to be a complete basic introduction to the language, and in this it succeeds well. It is divided into four sections.

The first is aimed at the complete newcomer – it does not even assume that the reader has programmed before. It introduces you to the basics of the ARexx setup, and how to start and use it, but it doesn't stop there. Of the four titles reviewed here, it does the best job of conveying to the newcomer just what can be done with ARexx.

The second section covers all the main points that make ARexx different. It explains ARexx's handling of character strings, its parsing mechanism, the compound symbols used for tables and arrays, and the superb tracing and debugging tools. The more standard language constructs, like **IF** statements and **DO** loops, are also covered here. The explanations are all clear and helpful.

In the third section, the book devotes about 75 pages to dealing with ARexx control of application programs. The general issues of ARexx ports, and how to send messages to them are explained, including the difference between the two main types of ARexx interfaces, command hosts and function hosts.

Covering this subject can be tricky. The commands which control each particular application – a word processor or a graphics program, say – are not part of ARexx itself and are usually different for each package. If you tried to describe every product, you'd end up with a huge volume – largely useless and boring to most readers. If you don't you are always in danger of leaving out something interesting and relevant. Chapters like this can only give some examples and ideas for the user to adapt to his or her needs.



If you're just starting out in ARexx (and can afford the cover price), Using ARexx on the Amiga is for you.

Descriptions of several common applications are given here, including databases, graphics programs like *Art Department Pro*, text processors, music creators, bulletin-board systems, multimedia presentation systems, video software and more.

The final (and largest) section contains a full description of all the ARexx functions.

Even though this book will help you learn ARexx to a good standard, it contains very little information about the inner structure of the language itself. It is therefore less suitable for an advanced programmer who also uses other languages; as its title implies, it is more oriented to the ARexx user than to the ARexx interface programmer.

Overall, *Using ARexx* is straightforward and uncomplicated. If you have ever used Gold Disk's *Hyperbook* presentation software, Sullivan and Zamara's names may ring a bell since they are its authors too. Even though *Hyperbook* does not have as many bells and whistles as other multimedia programs, it is widely acclaimed as one of the easiest ways to create simple presentations. (Incidentally, it also has one of the best implemented ARexx macro interfaces that I have seen.) The same philosophy of simplicity and straightforwardness is very much apparent in this book.

My only quibble is that the book fills up space with blanks and sells it. In my opinion it could easily have been half its current size (420 pages), and it would have been just as readable. However, it might have been more difficult to justify its price. Combine this with the ridiculous exchange rate on books from America – where $1 comes out to about £1 – and the book weighs in at a hefty £32.45. On the other hand, it is a really good book and includes a disk with the examples to save you typing, as well as a collection of ARexx PD utilities. I don't think anyone starting out with ARexx will be disappointed with it. **AS**

SHOPPING LIST

Using ARexx on the Amiga..£32.95
Zamara & Sullivan
ISBN: 1-55755-114-6
Paperback – 420 pages
from: Abacus, Computer Bookshop,
☎ 021-706 1250

CHECKOUT
USING AREXX ON THE AMIGA

Usefulness for beginners
●●●●●●●●●○
Definitely the most complete and detailed book for a beginner.

Usefulness – advanced
●●●●○○○○○○
Not really – this is intended as an introductory book.

Comprehensiveness
●●●●●●○○○○
Although it covers its subject very well, some technical details are missing.

Value for money
●●●●●●○○○○
The high price is more the fault of the silly exchange rate.

Overall rating
●●●●●●●○○○
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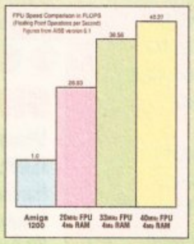
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DTP design

There's more to Desktop Publishing than pushing a block of type and a few pictures around the page until it "looks right". Jeff Walker checks out three books which, while approaching the problem differently, all offer sound practical solutions.

VISUAL LITERACY

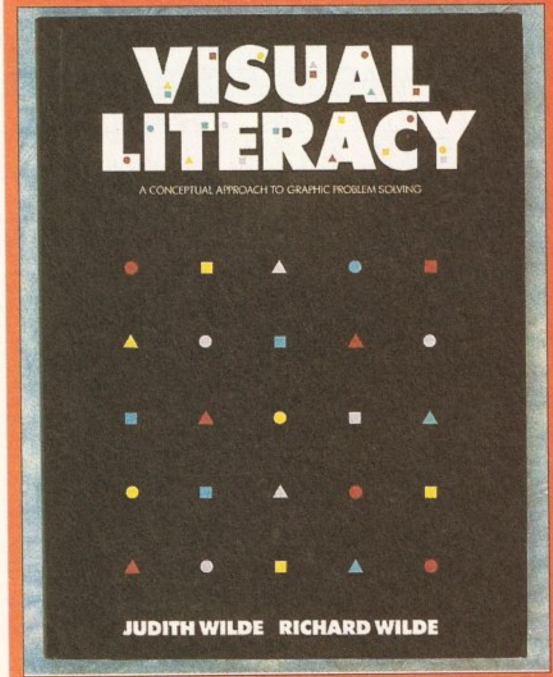
Suppose you were given just four black squares of the same size and asked to use them, and only them, to create six graphic images, each one intended to express the meaning of the following key words: Order, Increase, Bold, Congested, Tension, Playful. How would you get on?

It's an interesting concept – and it's also the kind of exercise student graphic artists are given to help them to improve their "visual literacy" skills. In fact, the idea behind this particular exercise is to develop a geometric idiom through the discovery of the various two-dimensional design principles which have to be understood before you can extend your graphic vocabulary.

Visual Literacy contains 19 such exercises, and they range from that simple black-square problem to the much more conceptual "number eleven" problem where you have to transform that number into a 6in by 9in coloured illustration as a personal expression of yourself.

Now if the description of that last problem made you laugh or think of hippies and psychedelic drugs, *Visual Literacy* is probably not the book for you. This is a serious work aimed at teaching original and innovative thought.

Of course there are no correct answers to any of the exercises, "right" or "wrong" is neither here nor there – learning how to apply your brain is the goal. But to give you an idea of how inventive your own efforts have been you can compare them with more than 1,000 "solutions" printed in the book – and these have been executed by real students of joint authors, Judith and Richard Wilde.



This provides a conceptual approach to graphic problem solving for the serious graphic design student.

Each problem has a brief introduction that analyses the goals of the exercise and outlines what visual effect or effects it is intended to achieve. Following the example solutions is a short piece of text explaining how you should have approached the problem.

You may consider £30 a lot of money to pay for a book with only 19 exercises, but bear in mind that *Visual Literacy* is an A4-sized (297mm by 210mm) hardback and it is published in full colour on high-quality paper.

It also comes rather highly recommended by the senior art director of *The New York Times*, who says of *Visual Literacy* in the foreword: "Even with all my years of professional experience, after reading the problems and seeing the wonderfully varied solutions, I've been introduced to a new way of thinking." High praise indeed.

SHOPPING LIST

Visual Literacy **£30**
ISBN: 0-8230-5619-8
Hardback – 191 pages
from: Bookmark Express,
PO Box 349,
Guernsey GY1 3UZ
☎ 0481 48181

CHECKOUT Visual Literacy

Readability
●●●●●●●●●○
Not an easy category to define, since the idea of the book is to make you go away and think up solutions to problems. The many solutions provided by the authors' students are certainly worth browsing through, though.

Value for Money
●●●●●●●●○○
The most expensive, yet – bearing in mind the quality of the advice and the original approach – this is probably the best buy of the three reviewed here.

Overall rating
●●●●●●●●●○
If you have dreams of using your Amiga to train yourself as a graphic designer or illustrator, the professional advice in *Visual Literacy* is priceless. You could spend a fortune on years of night classes and be taught a lot less than is contained in these 190 pages. It's a book that teaches you to think original thoughts rather than simply base your designs on what somebody else has already done.

GRAPHIC DESIGN COOKBOOK

This is an age when no one seems to have the time to sit down and read anything of any substance (present company excepted of course), so a book that you can't read would seem to be the perfect solution for harassed publishers everywhere. It sounds daft, but the concept behind the *Graphic Design Cookbook* is brilliant and simple.

Most published pages are composed of design devices that, while particular to some publication, are variations on a theme. Take page numbers, for example (sometimes called "folios"). Most magazines and books have page numbers somewhere on the page, but there are many different ways to present them.

Another example. Look at this page. See that black strip in the top

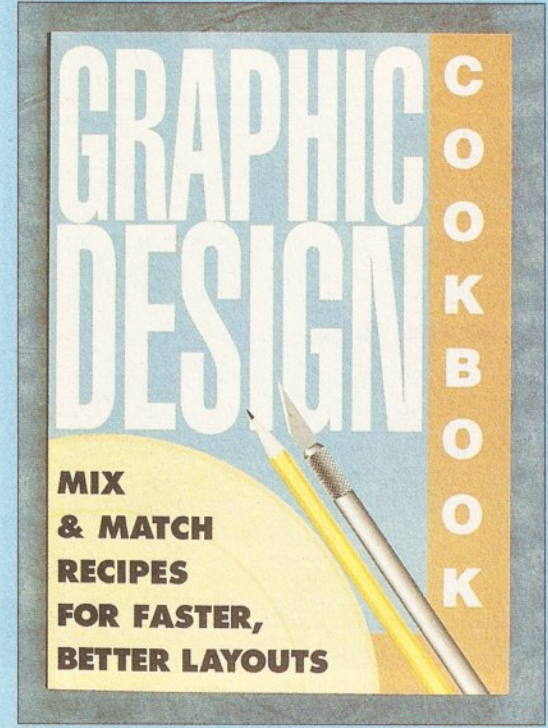
GRAPHIC IDEA NOTEBOOK

First published in the US way back in 1980, the *Graphic Idea Notebook* has recently been revised to bring it more in-line with modern thinking and publishing methods. There are not too many books that stay in print for five years, let alone 13, so without a single word from me it's not hard to guess that this book must have something pretty special going for it.

That something is the the way it offers more than 1,000 editorial design ideas, including 87 graphic tricks to grab a reader's attention, 53 ways to bring out the hidden meanings in pictures, 114 ways to combine and join pictures, 110 ways to indicate motion and direction, 23 ways to show increase and decrease in value, 31 ways to

by the book

corner that says REVIEWS? That's called a "kicker" in the trade and you'll see the same device used in different ways in almost every magazine you buy.



So what's on the menu? About 1,000 ideas you can mix and match to create original page designs.

Coming up with new ideas for page designs can be difficult. Often you find yourself basing your current design on just a few ideas borrowed from just a couple of publications. Flicking through more publications would give you more food for thought, but a pile of a few hundred magazines costs a small fortune and would take ages to peruse. So what you really need is a "cookbook".

The *Graphic Design Cookbook* is divided into five general chapters: structuring space, orienting on the page, text systems, ordering information, pictorial considerations. Each chapter is sub-divided into more specific themes like page border devices, comic captioning systems, initial caps, pull quote systems, grids, and image treatments. In total there are 63 specific themes in the five chapters, and up to 12 different ways per page to use a device. There are about a thousand different ideas in all. So to come up with an original design you simply need to pick one device from each section that is relevant to the kind of page you are designing.

Of course this is not a design or desktop publishing tutorial book, because it's actually a lot simpler than that. By following the method suggested above, even someone with the design acumen of a skink can use the *Graphic Design Cookbook* to mix and match design devices and come up with pages that look original. Innovation is but a short step from there.

SHOPPING LIST

Graphic Idea Notebook £14.95
ISBN: 0-935603-64-6
Paperback – 206 pages
from: Bookmark Express,
PO Box 349,
Guernsey GY1 3UZ
☎ 0481 48181

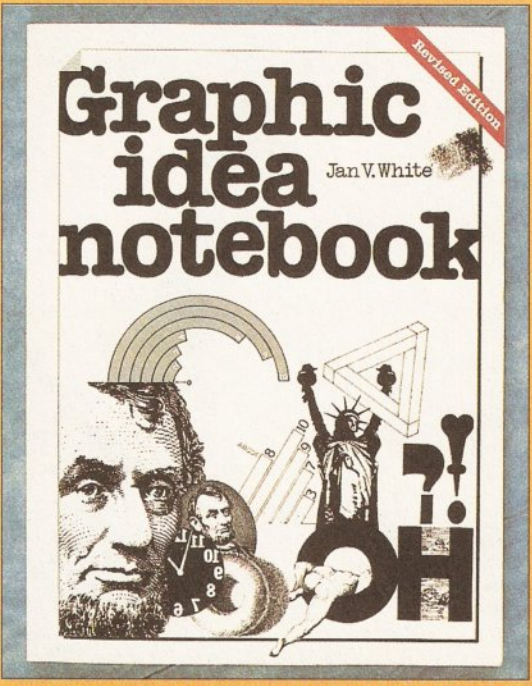
CHECKOUT Graphic Design Cookbook

Readability
●●●●●●○○○○
Perhaps this should read "accessibility" since you don't read it, you go through it looking for ideas. In this respect it works perfectly, but the fact that there is no text, and hence no explanations or design hints, must be a drawback

Value for Money
●●●●●●●●●○
A thousand different ideas for less than a tenner has got to be excellent value!

Overall rating
●●●●●●●○○○
If you ever find yourself staring at a blank screen wondering where to start, one flick through the *Graphic Design Cookbook* is guaranteed to crack that mental block and get the old creative juices flowing once more.

show change in time, 124 ways to make the most of mugshots, 103 ways to uses boxes, 201 kinds of charts and graphs, 43 versions of maps of the world, 37 versions of maps of the US, 116 ways ways to break up text with subheads, initials, indents... the list goes on and on.



This book may be 13 years old but it contains ideas that are just as valid today as they were back in 1980.

Unlike the similarly entitled tome above, this is not a cookbook, however, it's a proper design tutorial. Almost every idea is at least captioned with a description of what that particular idea is attempting to achieve. Scribbled (but readable) notes and diagrams scattered around the book give it a workmanlike feel that many similar books lack. No coffee-table poseur this, it's a genuine notebook – and there is plenty of space on most of the pages to enable you to add your own notes if you feel like it.

The book is published exclusively in monochrome and the word "colour" hardly features – which makes it a perfect companion for any desktop publisher who is trying to get his or her work in black and white noticed. You may well be surprised at how much can be achieved in monochrome; effects that sometimes cannot be created in colour. These days many people look on mono DTP as a poor man's trade, but this simply is not true. The shame is, as colour is becoming cheaper and more accessible to smaller pockets, the skills and assets of mono DTP are being forgotten. This book shows that there is more to colouring a page than cyan, magenta and yellow.

Of course the vast majority of ideas are just as applicable to colour publishing as mono, it's just that you'll have to use your imagination to visualise them.

SHOPPING LIST

Graphic Idea Notebook £14.95
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☎ 0481 48181

CHECKOUT Graphic Idea Notebook

Readability
●●●●●●●●○○
Some of the notes are rather brief, but at least you are told what's going on.

Value for Money
●●●●●●●●○○
Again, here is a book with over a thousand different ideas – plus explanations this time – which is still relatively cheap.

Overall rating
●●●●●●●●○○
The Graphic Idea Notebook urges that nothing succeeds like excess. If you've got it, flaunt it. If you haven't got it, this book teaches you how to get it!

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The Ami-Cipher Connection

An encryption/decipher utility and some interesting code to study. Paul Overaa shows how he wrote a Workbench 2/3 utility, gives away program and source, and even adds an ARexx interface!

The symbol ☛ means *do not* type a return – keep typing to the end of the next line. ▼☛ means type a *space, then* keep typing to the end of the next line.

One of the most useful aspects of the public domain/'anything-ware' scene is that Amiga users interested in coding can often get to see source code written by more experienced programmers. In theory this provides a great way to learn about the Amiga, but unfortunately there's a trend developing whereby many coders who write utilities keep the source to themselves – for reasons not unconnected with money.

Who hasn't seen notes like: 'Pay a few quid and I'll give you some proper documentation', or 'Pay a shareware fee and I'll give you a better (or proper) version of the program', in certain utilities? Now all this is fair enough – after all, it does take time and effort to produce a utility and with the better, more useful, ones a small fee is not an unreasonable thing to request. But lack of source code is more of a problem because coders miss the chance of seeing how such programs have been written.

This is one of the reasons why *Amiga Shopper* runs regular programming tutorials. And of course, with the cover disk now becoming a regular occurrence, we've got the chance to provide you with even more coding help.

THE PROGRAM

This month's tutorial is a typical example and it involves a file encrypt/decipher utility called *Ami-Cipher* that was written (in C) a few months ago. I won't bore you with the details of why it was needed but suffice to say that although it is just a tool I knocked up for private use it is nevertheless not a 'bodge up' job. It is well-structured, has a reasonable-looking (although simple) Intuition interface, and it uses solid resource-allocation and error-handling methods. But perhaps best of all, *Ami-Cipher* is only about 20K in size – so there aren't vast acres of code for you to examine.

In short here is an opportunity to see a simple Workbench 2/3-based utility in both runable and source forms, and to have the main ideas of the underlying code explained. Some more good news is that the ideas behind much of the code will already be known to you because *Ami-Cipher* uses the stack-based, dynamic resource-handling technique that was examined in the December issue.

The *Ami-Cipher* utility uses two ADT units (which I'll discuss later) and two program-specific code modules called main.c and amiga.c. As far as the program specific modules are concerned the 'main.c' module is so called, not because it contains the bulk of the code, but because it contains the **main()** function. It's job is to allocate an ADT stack, and then make a call to the function **AmigaProg()** which is, effectively, the workhorse part of the *Ami-Cipher* program. When *Ami-Cipher* terminates, control returns to this main module and, since it knows that the program is about to close, it then has to de-allocate or closedown any system resources which are in use (Listing 1 provides the details).

As *Ami-Cipher* starts it executes the routines specified in the list of function pointers shown in Listing 2. Libraries get opened, the *Workbench* screen gets locked, and the window, gadgets and menus are installed. You'll find each routine in the amiga.c source module but I'm not going to repeat the explanation of how my ADT stack-based resource tracking system works – get the details from your December copy (if you missed it, see pages 90 and 91 for our back issues).

Providing no errors occur as the program initialises itself, control gets passed to the **AmigaProg()** function present in the amiga.c file. This **SetRast()**s the background colour, refreshes the window frame, and draws various images and boxes using the following kinds of, fairly straightforward, Amiga library calls...

```
 SetRast(g_rastport_p,3); /* Blue
on my WorkBench */

 RefreshWindowFrame(g_window_p);


DrawImage(g_rastport_p,&Image1,0,0
);
```

Having set up the display an 'event-driven' loop is then used to put the program to sleep until the user does something of interest. I've used the **WaitPort()** function for this, although **Wait()** would have been more appropriate if we had multiple message ports involved.

When Intuition detects some kind of user activity it sends a message to the program. Depending on the type of message received (close-window, gadget or menu event), a switch statement is then used to either set an exit flag, or execute the appropriate gadget or menu routine. Listing 3 shows the code arrangements used.

In other words, *Ami-Cipher* basically works like this: it first allocates the resources needed, then sets up the display, and then... goes to sleep! It's not until the user selects a menu item or hits a gadget that Intuition sends *Ami-Cipher* a message. At this point the program wakes up, and the message-collecting event loop dutifully calls the routine that handles the actions selected by the user.

Ami-Cipher's event-handling

LISTING 1

```
Listing 1: the main() function from Ami-Cipher's
main.c module

main(int argc, char *argv[])

{

UBYTE error_number=NO_ERROR;

if(!(g_resource_stack_p=CreateStack(void *)))
error_number=NO_STACK;

else  {
        error_number=AmigaProg();

while(!PopStack(g_resource_stack_p,g_function))
g_function();

        KillStack(g_resource_stack_p);

      }

return(0);

} /* Logical end of program */
```

LISTING 2

```
Listing 2: on start up Ami-
Cipher executes this set of
routines.

UBYTE (*display_list[])() = {
          OpenInt,
          OpenGraphics,
          OpenGadtools,
          OpenAsl,
          LockScreen,
          GetVisInfo,
          SetUpGadgets,
          CreateWindow,
          CreateMenu,
          CreateMenuLayout,
          InstallMenu,
          CreateFileRequest
};
```

LISTING 3

```
Listing 3: event-driven coding loops are
extremely important on the Amiga.

do {

    WaitPort(g_window_p->UserPort);

    while (message=(struct IntuiMessage
*)GT_GetIMsg(g_window_p->UserPort))

          {

          class=message->Class;
code=message->Code;

          GT_ReplyIMsg((struct IntuiMessage
*)message);

                    switch  (class) {

                              case
IDCMP_CLOSEWINDOW:

exit_flag=TRUE;

                              break;

                              case
IDCMP_MENUPICK:

exit_flag=MenuEvent(code); break;

                                        case
IDCMP_GADGETUP:

exit_flag=GadgetEvent(code); break;

                                        default:
exit_flag=TRUE;

                                        break;

                                        }

                    }

          }while(!exit_flag);
```

routines' Gadget messages arrive as **IDCMP_GADGETUP** messages. There is only one custom gadget in use, the string gadget which collects the cipher key, and in fact the only important job my handler routine has to do is to use the ANSI **strlen()** function in order to measure the length of the key.

This is primarily required for subsequent cipher operations but, since key lengths of zero are obviously invalid, I also check for this and turn off the encrypt/decipher menu option during the time that a valid cipher key is unavailable. Listing 4 shows the type of code used to achieve this.

Menu handling is a little more involved because there is both a Project menu and a Function menu in use. Basically I collect the menu number using the system **ITEMNUMBER()** macro and on the basis of the result, execute either a **ProjectMenuHandler()** or a **FunctionMenuHandler()** routine.

The former routine uses a switch statement to identify and execute the various cases (Select source file, Specify output file etc.), the latter performs just one job – the encryption/decipher operation.

The reason, incidentally, that **FunctionMenuHandler()** is also coded as a switch statement is that this makes it easier to add extra options later.

DISK FILE NOTES...

You will find the utility itself, all of the source/object code, and my ADT modules on the cover disk – along with some extra notes about using the program.

Main.c and amiga.c are the two modules I've already discussed and images.c contains data for the various images used in the program. The general.h and amiga.h header files contain #include references, #defines, prototypes as well as global variables (the latter also include some static Intuition/ Gadtool structures).

The display_position.h file just holds co-ordinate positions for the various box/images used in the *Ami-Cipher* display. Stack.h is the stack ADT header (the same file as was used in the December resource allocation example). The code, as you'll see, is ANSI C style and it was compiled using SAS C using the arrangements specified in the main.lnk file (which is also supplied on the cover disk).

You will not, incidentally, find any detailed code that sets up file buffers, or loads/saves the files being processed. Instead you'll be able to see me using the various high-level functions (which are defined in listing 5) such as...

```
g_buffer_p=CreateBuffer(g_source_f
ilename_buffer);
```

The reason is that I've included a buffer handler which has hidden all the nitty gritty code details behind a relatively high-level ADT-style interface (this is yet another example of the ideas discussed in the December issue). Loadbuffer.h is the associated header file that needs to be included at compile time.

I CONFESS!

Now an admission of guilt – for this utility the encryption algorithm I normally use has been changed. After all there'd be no point in my using the particular technique that I do use, if the internal code arrangements were public knowledge! Instead you've got an interesting slant on an old favourite which involves a cyclical, modulus-based exclusive-OR scheme which in terms of C code looks like this...

```
  size=AskBufferSize(buffer_p);

  start=AskBufferStart(buffer_p);

  for (i=0;i<size;i++)
start[i]=start[i]^(key_p[i%key_len
gth]+i%256);
```

It's effective and perfectly secure for normal use and, best of all, it is easy to code because both encryption and decipher operations are the same.

You may have wondered why the *Ami-Cipher* program has been used in this tutorial. Let me assure you it wasn't by chance. The first reason is that it was convenient because I'd already covered the ideas behind the resource allocation and de-allocation techniques, which should have made the explanations and source ideas outlined this month somewhat easier to get to grips with. The second reason is to enable those of you who are both C literate and interested in ARexx, to study the code and the general ideas – because our next step is to add an ARexx interface to the program (see listing 5).

THE AREXX INTERFACE

You'll find plenty of articles dealing with the use of the ARexx language but details about how you actually add an ARexx interface to a program have been rather less easy to come by – until now. Of course, there are a number of pieces of 'ready made' interface code available in the public domain but, if you want to really understand what needs to be done, it is far better to have the job explained from start to finish as we are doing here.

The message system used with ARexx is, at the grass roots level, an Exec facility. From the Exec viewpoint information can be sent from one

LISTING 4

```
Listing 4: Ami-Cipher needs only a simple gadget handler.

BOOL GadgetEvent(UWORD code)

{

BOOL exit_flag=FALSE;

UBYTE key_length, *key_p;

key_p=((struct StringInfo *)g_gadget1_p->SpecialInfo)->Buffer;

key_length=strlen(key_p);

if (key_length) OnMenu(g_window_p,SHIFTMENU(1)|SHIFTITEM(NOITEM));

 else OffMenu(g_window_p,SHIFTMENU(1)|SHIFTITEM(NOITEM));

return(exit_flag);

}
```

LISTING 5

```
Listing 5: The interface routines defined in the LoadBuffer.h header.

typedef void BUFFER;

BUFFER  *CreateBuffer(TEXT *filename); /* returns NULL if request
fails */

void       KillBuffer(BUFFER *buffer_p);

ULONG   AskBufferSize (BUFFER *buffer_p); /* returns size of buffer
*/

UBYTE   *AskBufferStart(BUFFER *buffer_p); /* returns start of buffer
*/

UBYTE   SaveBuffer(BUFFER *buffer_p, TEXT *filename);
```

THE AREXX MESSAGE FORMAT

```
struct RexxMsg {
    struct Message rm_Node;      /* standard EXEC message structure */
    APTR      rm_TaskBlock;      /* points to a RexxTask structure */
    APTR      rm_LibBase;        /* library pointer */
    LONG      rm_Action;         /* command (action) code */
    LONG      rm_Result1;        /* primary result (return code) */
    LONG      rm_Result2;        /* secondary result */
    STRPTR    rm_Args[16];       /* argument block (ARG0-ARG15) */
    struct MsgPort *rm_PassPort; /* forwarding port */
    STRPTR    rm_CommAddr;       /* host address (port name) */
    STRPTR    rm_FileExt;        /* file extension */
    LONG      rm_Stdin;          /* input stream */
    LONG      rm_Stdout;         /* output stream */
    LONG      rm_avail;          /* for future expansion */
    };                           /* size: 128 bytes */
```

task to another by creating a data packet known as a Message and then transmitting it to its destination. These messages pass between tasks using another Exec-defined structure called a 'message port' which is basically just a software entity whose job, among other things, is to act as a receiving station for messages. Before a program can receive an ARexx message it must have allocated and initialised a suitable message port. One easy way of doing this is to use the amiga.lib library's **CreatePort()** function and it is this approach that I'll be adopting.

The real message data is always provided as an extension to the message structure and this is done by defining a new structure in terms of a message plus other data. The Intuition IntuiMessages are probably the most common example of such structures but ARexx has also defined its own message format which, as a C structure, is shown in the panel above.

To see how these messages are used when an ARexx script causes a command to be sent to some external program, let's consider the following example...

```
/* message.rexx */

address 'AMICIPHER'

'QUIT'
```

When this runs, the ARexx interpreter encounters the **ADDRESS** instruction and searches through the Amiga's public ports list for a port called **'AMICIPHER'**. The interpreter then looks at the next line of the script and, because it doesn't understand **QUIT** as being ARexx-relevant it classes the statement as a command to be sent to the currently specified host (which in this case would be the *Ami-Cipher* program).

How is it done? Well, if you look back at the RexxMsg structure you'll see that it contains a 16-element array defined like this...

```
 STRPTR   rm_Args[16];      /* C
definition of the argument */
                /* block (ARG0-
ARG15) */
```

This space is used by ARexx to insert pointers to the 'real data' held in the message and for simple commands it is the first slot, known as ARG0, which is used. ARexx, as you probably know, is a string-oriented language and it does in fact take a string-oriented view of the 'commands' transmitted to other programs. It does not, however, take the simple option of just placing a pointer to the string into ARG0 but instead builds another variable-length entity known conventionally as an 'argstring'. These are based on something called a RexxArg structure but by convention argstring's pointers reference not the base of the structure, but the buffer area where the text item is stored. This, coupled with the fact that the text strings themselves are null terminated, means that C programmers can treat argstrings as normal C-style string pointers.

At this point we can provide a reasonably complete scenario for the above communications example. When ARexx recognises that **QUIT** is going to be sent to an external host it builds a RexxArg structure and then places the equivalent argstring pointer into the ARG0 location available in the message structure. Having done that, it transmits the message to the host port using the normal Exec facilities. Now the host will be monitoring its message port for data using the Exec WaitPort() or Wait() functions and when a message arrives it will use **GetMsg()** to collect it, read the contents of the argstring, and take appropriate action. The program will either carry out the 'instruction' that the argstring represents or will be unable to do so – the ARexx convention here is that programs should place into the **rm_Result1** field either a zero (to indicate successful completion) or some non-zero error code.

A few generally useful error codes, including **RC_OK** and **RC_WARN** are defined in the ARexx errors.h support file (it is of course these returned error codes which ARexx places into its RC variable). Once all the necessary operations are complete the program can use Exec's **ReplyMsg()** function to 'send' the message back to ARexx.

Incidentally, some external commands will produce results which need to be collected. When a script uses **OPTIONS RESULTS** ARexx sets a special **RXFB_RESULT** flag in the transmitted message's **rm_Action** field and the program, if it carried out

LISTING 6

```
Listing 6: these two routines provide the additional resource
handling needed for the ARexx interface!

UBYTE CreateARexxPort(void)

{

UBYTE error_number=ALLOCATION_ERROR;

if (g_rexxport_p=(struct MsgPort *)
              CreatePort("AMICIPHERPORT",0))

        {

         error_number=NO_ERROR;

         g_function=DeleteARexxPort;

         PushStack(g_resource_stack_p,g_function);

        }

return(error_number);

}


void DeleteARexxPort(void)

{

 DeletePort(g_rexxport_p);

}
```

LISTING 7

```
Listing 7: the modified
function list.

UBYTE (*display_list[])() = {
        OpenInt,
        OpenGraphics,
        OpenGadtools,
        OpenAsl,
        LockScreen,
        GetVisInfo,
        SetUpGadgets,
        CreateWindow,
        CreateMenu,
        CreateMenuLayout,
        InstallMenu,
        CreateFileRequest,
        CreateARexxPort
    };
```

LISTING 8

```
Listing 8: the modified multiple-port styled event loop

port_mask=(1<<g_window_p->UserPort->mp_SigBit)|(1<<g_rexxport_p-
>mp_SigBit);

do {

    Wait(port_mask);

    while(message_p=GetMsg(g_rexxport_p))

            {

            error_number=ARexxEvent((struct RexxMsg *)message_p);

            }

    while (message_p=(struct Message *)GT_GetIMsg(g_window_p-
>UserPort))

            {

            error_number=IntuitionEvent((struct IntuiMessage
*)message_p);

            }

   }while(error_number!=PROGRAM_EXIT);
```

the command successfully, should then build a suitable 'results' reply as an argstring and insert a pointer to it in the message's **rm_Result2** field. In these situations ARexx extracts this information and makes it available as the contents of the **RESULT** variable.

To be honest the extensions needed to add an ARexx interface to a program are often quite minor, especially when programs have Intuition-style event-handling code already in place. Nevertheless, when you take the ARexx-related code and put it into a typical Exec/Intuition environment, the finished code can seem complex. This is why I chose to explain the general *Ami-Cipher* source framework separately.

It is important that you get the first part of this article clear in your mind to ensure the following ARexx interface discussions make sense.

CODING DETAILS

The interface additions fall into a few well-defined areas with the easiest one being the addition of the code that creates and deletes the port used for the ARexx messages. Listing 6 shows the pair of routines used and you'll see that they just involve the use of the amiga.lib **CreatePort()** and **DeletePort()** functions used within the allocation/de-allocation framework (see December issue). To use it just add a CreateARexxPort entry to the list of functions that need to be executed on startup (see Listing 7).

At this point the ARexx connection is complete. All that remains is to modify the existing *Ami-Cipher* event collection loop so that it checks for, and uses, both the IntuiMessages and the ARexx messages which arrive. My original loop used the **Exec WaitPort()** function because messages were only coming from Intuition. Now we've got to monitor two ports, so the multiple-port **Wait()** function must be used along with a slightly more involved event loop.

So we **Wait()** for a message to arrive, check to see what kind it is and then pass the message on to the appropriate handler routine. Listing 8 shows the revised event loop and you should notice two things: I always check both ports (because messages from both ports could in theory arrive at the same time); and I've now isolated the Intuition message code into a separate handler routine (not essential but it did help to keep things tidy).

The high-level **IntuitionEvent()** routine which you'll find in the revised amiga.c module makes calls to the **GadgetEvent()** and **MenuEvent()** functions. These latter routines are essentially identical to those seen in the first version of *Ami-Cipher* although I have modified the values they return in order to provide additional error information. The reason for this is simple: with Intuition-style menu-driven operations I could prevent users from doing silly things (like encrypting non-existent files) by temporarily turning off inappropriate menu operations.

It's not possible to control the actions of an ARexx user to the same extent so instead we perform the specified ARexx command, check to see whether it was successful, and if necessary return an error indicator, which brings us to the last area of code changes we need to discuss.

AREXX COMMAND SETS

When an ARexx message arrives we need to examine the associated argstring and decide what to do with it. In other words we need to 'parse' the received command string and identify the components which are syntactically important.

Now the complexity, or simplicity, of such an interface will depend on what you want the program to be able to do while being remotely controlled. Extensive interfaces may need parser code that is as complex as that found in, say, a compiler – although in most cases far simpler arrangements can be adopted. *Ami-Cipher* only has a few use options and this has made it possible to provide complete control using only a minimal command set. The interface commands I chose to adopt are shown in the panel above.

For the purposes of this example I've coded the **ARexxEvent()** handler routine in the simplest way possible. Therefore a switch statement has been used to check the keyword in the first part of the string and if, on the basis of this, a second parameter is expected the string pointer is advanced past the keyword to the start of that parameter.

There is plenty of room for improvement in this particular section of code but, for example purposes, it serves its intended purpose well enough.

To make the ARexx commands work, a bit of sneaky code is used. Having identified the message category (**LOAD, SAVE**, etc.), and installed any second parameter in its rightful place, a fake menu or gadget event is created and passed to the event handlers that perform the actions associated with the original Intuition instigated events.

For instance, the **LOAD <path/filename>** command works like this. **LOAD** is recognised, the path/filename is then copied into *Ami-Cipher*'s source filename buffer, and the **MenuEvent()** routine is called with a fake 'load source file' menu number (created using the Intuition SHIFTMENU and SHIFTITEM macros). Providing no errors occur the **rm_Result1** field in the ARexx message structure gets set to **RC_OK (0)** before replying to the message. If something goes wrong the value is set to **RC_WARN (5)**. Listing 9 shows the overall framework as a cut-down version. You'll find the complete routine in the amiga.c module provided on the cover disk.

LAST WORDS

The coding changes required to give *Ami-Cipher* an ARexx interface were completed in less than a day and you'll find the amended code module and header file (amiga.c and amiga.h), a newly compiled runable program, and an amended document file, all on the cover disk.

The doc file now includes some notes about using the ARexx facilities. You will also find a few other, minor, changes in the code. For instance, prototypes for the event-handling functions had to be changed to reflect the new error-code-based return values, references to the two ARexx header files (storage.h and errors.h) had to be added and so on. Details can be obtained from the source. AS

AREXX INTERFACE COMMANDS

LOAD <path/filename>	attempt to load a specified file.
SAVE <path/filename>	set destination file path and name.
CIPHER <key>	set file encryption/decipher key.
ENCRYPT	encrypt file and write to specified destination.
QUIT	shut down the *Ami-Cipher* program.

LISTING 9

```
Listing 9: a cut down example of the ARexx message handling routine.
(See cover disk version for additional case values).

UBYTE ARexxEvent(struct RexxMsg *message_p)

{

UBYTE error_number=NO_ERROR;

TEXT *text_p;

message_p->rm_Result1=RC_WARN;

message_p->rm_Result2=NULL;

text_p=message_p->rm_Args[0];

if(!strcmp(text_p,"QUIT"))

        {

error_number=MenuEvent(SHIFTMENU(0)|SHIFTITEM(2),AREXX_CALL);

        }

if(!strncmp(text_p,"LOAD",4))

        {

         text_p++; text_p++; text_p++; text_p++; text_p++;

         ClearBoxText(&intuitext1,SMALL_OFFSET);

         strcpy(g_source_filename_buffer,text_p);

error_number=MenuEvent(SHIFTMENU(0)|SHIFTITEM(0),AREXX_CALL);

        }

if(error_number==NO_ERROR||error_number==PROGRAM_EXIT)

       message_p->rm_Result1=RC_OK;

ReplyMsg((struct Message *)message_p);

return(error_number);

}
```

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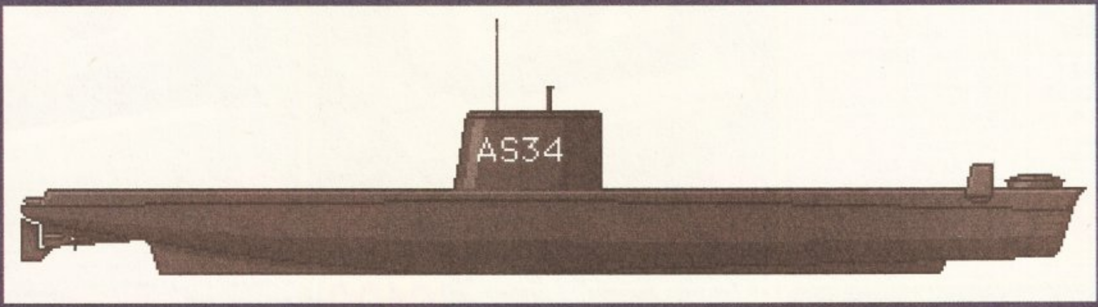
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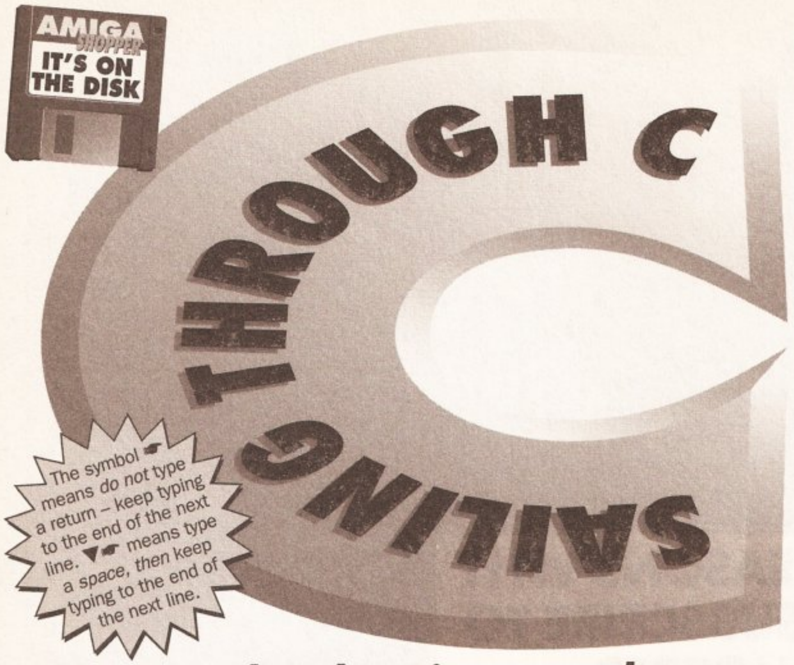


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The month Toby Simpson shows how to add-in some new requesters and get "Create a new record" up and running.

Last month we successfully integrated our GUI (Graphical User Interface) code with the file-handling code we wrote over the summer. This month's task is to tidy up the address book program by adding support for creating records into the main application, improving the user interface a little, and also adding some requesters.

This requires a few new techniques and the use of some routines in the Intuition library that we have not used before. The source code to this months Address Book is on the Cover Disk.

January's program allowed us to move through the records in our file, viewing them in our window, and making changes to them if we wished. Although we did not have a neat way of adding new records to the file, we were able to use the routine we wrote a while back which used the Shell window. Our main job this month is to add this new-records function properly into the windowing environment. Unfortunately, we are a button short because we could really do with adding one to our list. Since we have not hard-coded any fixed button values and numbers into the program, this is very straight forward. Slight changes need to be made to three files, firstly, to **address_gui.c:**

```
#define CONTROL_BUTTONS 5
```

This line, at the very start of the file defines how many buttons are shown beneath our field string gadgets in the window. Bumping the five up to six ensures that the program adds another. Then, we have to ensure that a button ID is defined for it in **address_book.h**, adding this line:

```
#define BTN_NEW 14
```

and finally, our main loop has to recognise this new button ID and be able to act on it, so a blank **CASE** statement must be added to our button detection **SWITCH**. We'll add the code in later.

```
case BTN_NEW:
  /*
      **   Create a new record
  */
  break;
```

The other catch, of course, is that our window was only designed to have five buttons, and adding another means it now isn't wide enough. This is remedied, by increasing the width to 370 pixels. Finally, we will need to add a new button name in **address_gui.c:**

```
char *control_names[] =
  {
  "Prev", "Next", "Save", "Goto",
"Search", "New"
  };
```

As if by magic, a brief re-compiling and running of the program later, we have the new button, labelled "New". If we press it, of course, we'll find it does nothing yet because we have not added any code to our new **CASE** part in **address_book.h**. Before we do that though, let us have a little look at requesters.

It became a lot easier under Kickstart 2.04 of the operating system (and above), to pop up little requesters onto the screen, such as "Insert disk", or "Are you sure?" with one or more buttons at the bottom. On the Amiga, a requester is a special type of window, which is "attached" to a window that you have opened. Very few programs these days use "real" requesters because they are complex to set up. Instead they use windows, which are far more flexible, and benefit from advanced features in 2.04 and later.

Under 1.3 of the operating system, if you wanted to have a requester with more than two buttons, you had to use the real requester code, or open a custom window with gadgets on; there was no simple way of giving the user this sort of menu with buttons – a choice of several options to press. Occasions when this sort of thing might be particularly useful involve requesters like this:

```
There are unsaved changes to the
picture
"df0:waterfall.iff"
Are you sure you wish to quit?

Yes Save&Quit Cancel
```

From kickstart 2.04, a really neat function called **EasyRequestArgs()** appeared, that allowed you to generate requesters of this type very easily indeed. Unfortunately, under 1.3 this does not exist, and we have to use the function **AutoRequest** instead. 2.04 users will benefit because **AutoRequest** simply diverts the call to **EasyRequest**, which lays out your requester for you, neatly centring all the text and making sure everything looks right for the 3D 2.04 environment. Under 1.3 we have to specifically dictate where all the text is going to be.

AutoRequest was designed for single or two-option requesters of the type:

```
No disk present in unit
df0:

Retry   Cancel
```

Or the single button version, which might be "Cannot continue, error" with an abort button. Since we have to remain compatible with 1.3 with our address book, the **AutoRequest** function is the best option. The Amiga autodocs list the prototype of **AutoRequest** as this:

```
BOOL AutoRequest( struct Window *,
struct IntuiText *, struct
IntuiText *, struct IntuiText *,
ULONG, ULONG, WORD, WORD );
```

Its parameters are quite straightforward. It takes a pointer to the window which it should be attached to. Then it has three IntuiText structures which allow strings to be defined and linked. The first is for the body of the requester, for example "Are you sure you wish to quit?", the next two are for the positive response (**OK**) and for the negative response (**CANCEL**) respectively. Finally, it takes IDCMP flags which are the equivalent of pressing **OK** and **CANCEL**, and the width and height of the requester itself. The IDCMP flags are quite handy. These enable you to make the right response automatically press the **OK** or **CANCEL** button for the user. Have you ever noticed, for example, that if you get a requester on the screen saying "Please insert a disk in df0:", doing so makes the requester vanish all by itself. This is because the requester accepts the IDCMP flag "**IDCMP_DISKINSERTED**" as the **OK** button. The width and the height are ignored under 2.04 and above, because that does your layout for you. Under 1.3 and below, we normally use dimensions of 320 by 70, or something close to that. **AutoRequest** returns a Boolean **TRUE** or **FALSE** value: **TRUE** if the user selected the positive button, or **FALSE** for the negative.

It would be overly complex for us to create stacks of IntuiText structures for use every time we want to use an autorequest, so we are going to write a small function which makes this job a lot easier by figuring out all the hard stuff itself. This will allow us to easily specify requesters and get a response. For this, we shall add a new function to **address_gui.c**, which looks a little like this:

```
/**********************************
*****
 *
 * BOOL YesOrNo(char *body_text,
char *ok_text, char *cancel_text)
 *

Shows a requester and returns TRUE
if the OK button was pressed, and
FALSE if the CANCEL button was
pressed.

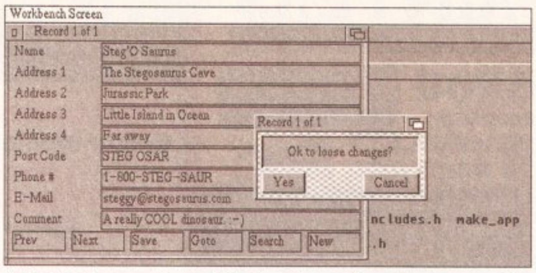
*/

BOOL YesOrNo(char *body_text, char
*ok_text, char *cancel_text)
```

We simply call this function with: a pointer to the body text, the text to be in the **OK** button, and the text to be in the **CANCEL** button. It then calls **AutoRequest** for us, having built the appropriate IntuiText structures, and returns the correct result, **TRUE** for **OK**, **FALSE** for **CANCEL.** This means, we can call it like this:

```
if (YesOrNo("Would you like
to see hello world?", "Yes",
"No Way"))
    printf("Hello world\n");
```

The function itself is quite easy to write, it uses nothing that we have not seen before. We simply build three Intuitext functions, and return the result of the call to **AutoRequest**.



A typical requester asking us to confirm that we really do want to lose changes. Just press the button.

Having written the Requester function, we are now in a position to write our code for Create a new record. How are we going to implement this function? Well, the first thing is to decide on the actual operation of the "New" button which we have added to our window. Pressing this should clear all of the fields ready for us to type a new record in, and when we press the **SAVE** button, a new record should be created. Rather than create an entirely new **write_record_data** routine to add records to the end of the file, we can easily adapt the existing one. Currently, we pass a pointer to the record data that we wish to save, and the record number to save as. Let us define a new record ID of -1, and adapt **write_record_data** so that if it finds this, it simply skips to the end of the file and writes the data there. This means a slight change to the start of the **write_record_data** function, in **address_functions.c**, so it looks like this instead:

```
BOOL write_record_data(char
*record_data, record_number)
{
  BPTR file_channel;
  long data_written;

  /* Open our file */
  if (!(file_channel =
Open("addresses",
MODE_READWRITE)))
    return FALSE;

  /* Seek to the correct position
of this file */
  if (record_number == -1)
    data_written =
Seek(file_channel, 0, OFFSET_END);
  else
    data_written =
Seek(file_channel, (record_number
* RECORD_LENGTH),
OFFSET_BEGINNING);

  if (data_written == -1)
    {
    Close(file_channel);
    return FALSE;
    }
```

As you can see, we are checking to see if the record number is equal to -1, and if so, skipping to the end of the file. Thus, if we were to fill a record with real data and call **write_record_data** like this:

```
write_record_data(my_record_data,
-1);
```

...then a new record would be created. With this in mind, we are going to create a new flag for the **address_book.c** file called **"new_flag"**, which will be Boolean, true or false. When **TRUE**, pressing the **SAVE** button will create a new record, and if it is **FALSE**, it will operate as normal, saving any changes to the current record on screen. If we press our "New" button, we'll simply set this flag to **TRUE**, and clear all of the field gadgets. This way, when the user has finished typing in the new record, pressing **SAVE** creates it. This is all well and good, but we need to polish the idea so that it looks good.

Last month we wrote a function called **show_current_record** which shows the currently selected record's fields in the string gadgets on the screen. We'll make a small alteration to it this month that allows us to use it to clear the window, so that it is ready for a new record to be typed in. Normally, we pass in a pointer to a place to store our record data, and the record number itself. The **show_current_record** function is then responsible for reading in the record, and displaying the information. As we did for **write_record_data**, we'll alter the routine so that if it has a record number of -1, then it clears the record instead. A slight alteration is required to the start of the **show_current_record** function:

```
  /* Attempt to read the named
record */
  if (record_id == -1)
    {
    /* Special case, so clear the
record */
    memset(record_data, 0,
RECORD_LENGTH);
    }
  else
    {
    /* Read a record in */
    if
(!(read_record_data(record_data,
record_id)))   return FALSE;
    }
```

Notice that we're using the function **memset**. This means "set memory". It takes three parameters. The first is a pointer to the memory itself, the last is the amount of bytes to set, and the middle one is the value to set each byte to, in this case 0, hence clearing a block of memory – our record storage area.

With the **write_record_data** and **show_current_record** suitably altered, we are able to implement the new record function. This means adding some new code, first into the "**case BTN_NEW**" part of the program in **address_book.c**. Earlier in this article we put a blank **CASE, BREAK** structure there. Now is the time to fill this out:

```
  case BTN_NEW:
    /*
    ** Create a new record
    */
    if (record_changed)
      {
      /* Ask if OK to lose
changes.. */
      if (!(YesOrNo("Ok to lose
changes?", "Yes", "Cancel")))
        break;
      }
    new_flag = TRUE;
    record_changed = FALSE;

show_current_record(record_data,
CREATE_NEW);

    /* Activate first string gadget
*/
    ActivateGadget(&window_gads[0],
addr_window, NULL);
    break;
```

There are two particular things of interest here. One is that we're calling our **YesOrNo** function we wrote earlier. Last month we put a special flag into the program, which was set if there were unsaved changes in the current record, although we did nothing with it. This month, we're using it to warn the user that they will lose any changes that they have made, and give them a chance to abort, and save the changes before continuing. The second is the call to **ActivateGadget**. If the user presses the "New" button, we can assume that they are then going to be typing data into a blank record, so it makes sense to activate the first string gadget in our window, ready for them to start typing. Note that we set the flag "**new_flag**" so that the **SAVE** code knows to create a new record rather than save changes to the existing one.

We can put **ActivateGadget** calls in all over our program, but most importantly in **address_book.c** where we handle **DEFAULT:** in the **SWITCH** statement. This is where we deal with actions after the user pressed <Return> in a string gadget. Logically, we should then immediately select the next gadget on screen so that they can continue typing. We can do this by adding these lines of code:

```
  /* Activate next gadget */
  new_id = gad_pressed->GadgetID +
1;
  if (new_id == TOTAL_FIELDS)
  new_id = 0;

ActivateGadget(&window_gads[new_id
], addr_window, NULL);
```

This simply activates the next gadget in the list. We take the current one, add one to it, check that we have not reached the bottom (and reset if we have) and activate the appropriate gadget.

It's then simply a matter of altering the **SAVE** code, like this;

```
case BTN_SAVE:
  /*
  ** Save changes
  */
  if (new_flag)
    {
    /* Save new record... */
    if
(write_record_data(record_data, -
1))
      {
      /* Record created OK */
      total_records++;
      current_record =
total_records - 1;

show_current_record(record_data,
current_record);
      new_flag = FALSE;
      record_changed = FALSE;
      }
        }
  else
    ... last months save changes to
existing record code ....
```

...and we have a fully working **Save** function.

You'll notice that as well as the changes made above, there have been several other slight enhancements to the program, such as a few calls to the **YesOrNo** function in order to confirm actions.

Although it's not in this month's source code, you might like to have a go. Try adding some code that brings up a little requester if you try and quit the program, using the **CLOSE** gadget on the window, confirming if you want to lose any changes. You can check the **record_changed** flag, and use the **YesOrNo** requester function.

There is a limit to how complex you can make a program of this sort before it becomes silly. An address book program should really be functional, easy to use and efficient.

Next month, we'll finish off some of the other functions we intended to write, such as **Search**, and **Goto**, but how could we make our program really powerful without going over the top? Ideally, we would add an ARexx port. This enables users to write small programs, in a high level language (much simpler than C) called ARexx scripts, and get them to control our program and make it perform actions. This could, for example, assuming that we provided a suitable ARexx interface, allow the user to write a small ARexx script which generated an address list suitable for printing on a single sheet of A4 which contained names and phone numbers only.

ARexx is a complex issue, and something that we will deal with in much greater detail later instalments of the C Programming guide. See you next month! AS

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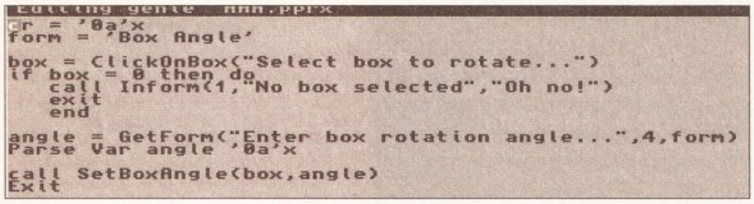
AREXX FOR ALL

With a quick rub of his magic lamp, Jason Holborn conjures up a desktop publishing Genie – with a little help from ARexx and Professional Page.

Gold Disk's *Professional Page* has been one of the premier Amiga desktop publishing programs for many years now, during which time it has undergone more changes than a political manifesto. One of the best features of more recent versions of *Professional Page* (v3.0 onwards) is its powerful "Genies" facility that enables you to automate just about any *ProPage* task by writing macros from within *ProPage* itself. Not surprisingly, these Genie macros are based around ARexx and can therefore draw upon the powerful decision-making and task-communication facilities that have made ARexx so popular.

ProPage can also be controlled externally by sending commands to its ARexx port **PPAGEREXX** but for pure convenience alone, writing macros using *ProPage*'s own Genie Editor is a lot more productive. Gold Disk are a productive lot and thankfully most of the macros you could ever want are already built into *ProPage*. To access them, simply click on the Genie icon (it's shaped like Aladdin's lamp) and a requester will pop up onto the screen giving you a list of all the available Genie macros. If you scroll down through this list, you'll find an almost bewildering array of macros to handle anything from drop caps and box shadows to the automatic generation of graphs and even the importation of worksheets from Gold Disk's own *Professional Calc* spreadsheet program.

As an example of how to use Genies, create a box and then import a bitmapped image into it. Unless you've been very lucky indeed, the chances are that the image doesn't fit exactly into the box. Without Genies, you'd be forced to manually scale the bitmap by changing the 'X' and 'Y' scale values of the bitmap using the 'Box->Alter->Active' menu option. As any *ProPage* user will no doubt agree, this can be a rather hit-and-miss affair often requiring several adjustments before the right scale values are found.



```
cr = '0a'x
form = 'Box Angle'

box = ClickOnBox("Select box to rotate...")
if box = 0 then do
    call Inform(1,"No box selected","Oh no!")
    exit
    end

angle = GetForm("Enter box rotation angle...",4,form)
Parse Var angle '0a'x

call SetBoxAngle(box,angle)
Exit
```

Genies can be edited directly from within ProPage using the included Genie Editor. And, what's more, they don't cost as much as hiring Robin Williams.

With *ProPage* Genies, however, all this hassle is removed – simply click on the Genie icon, select the **FitBitmapToBox** Genie and then click on the 'Execute' gadget. If all went well, the *ProPage* titlebar should change to a prompt asking you to click on the box you'd like the Genie to work on. Click on your picture box and it should be scaled to fit the box exactly. Good eh?

GENIE OF THE LAMP

Now that we've learned how to use *ProPage* Genies, let's have a go at writing our own. Unlike most ARexx-compatible programs, *ProPage* provides a sophisticated editor designed specifically for writing Genie macros. To access it, click on the Genie icon again and then click on the 'define' gadget. After a little disk accessing, the Genie Editor should pop up onto your screen. This is actually a stripped-down version of *ProPage*'s Article Editor utility and although it lacks many of the text formatting commands offered by the Article Editor, it's more than good enough for writing macros.

Before we dive in and start coding, however, let's take a look at an existing macro. Select the 'Quit' option from the Macro editor's pull-down menus and you'll be returned to *ProPage*. Select a macro from the list of those available, and then click on the 'Modify' gadget. The Macro Editor will reappear, complete with the ARexx listing for the macro you selected.

On first inspection, you'll notice that the macro doesn't open *ProPage*'s ARexx port. If we were writing a script that called *ProPage* from the Shell (or indeed another ARexx program) this would be vitally important, but it's not necessary in this case because Genies are run from within *ProPage* itself and therefore the *ProPage* ARexx port and all the functions it provides are already available – hence the reason why *ProPage* Genies are referred to as 'macros' rather than scripts. There's no real difference between a macro and a script other than the fact that a macro is called by the program that it controls.

The symbol ☛ means do not type a return – keep typing to the end of the next line. ▼☛ means type a space, then keep typing to the end of the next line.

BOX CLEVER

The latest version of *Professional Page* v4.0, offers over 330 ARexx functions which give almost complete control over every aspect of *ProPage*'s operation. Obviously we can't cover them all in this month's column, but you'll find a complete breakdown of each in the v4.0 Supplement manual lurking at the bottom of your *ProPage* box.

Before we dive in and start looking at a few of these functions, it's important to know how *ProPage* handles pages and boxes through ARexx. Although you may only have a single page in your DTP documents, chances are that it'll use a lot more than just one box – you might have a box for the page headline, another for the body text and so on.

All pages and boxes have their own unique identifiers which are used to allow *ProPage* Genies to identify one box or page from another. These identifiers can be either a user-specified name or – in the case of an unnamed page or box – a number. If no identifier is specified, your Genie will work on the current page or box instead. In the case of boxes, *Professional Page* automatically attaches a unique identifier number to each new box that you create. You don't need to

BEGINNERS START HERE

What is ARexx?

ARexx is a programming language bundled free with all Amigas based on Workbench 2.04 or better. Written by William S Hawes, ARexx can not only handle the tasks normally associated with programming languages like BASIC but can also control other applications that feature an ARexx "port". By simply writing an ARexx "script" (the ARexx equivalent of a source code program), you can automate any application that can communicate with ARexx. Take ASDG's *Art Department Professional,* for example. Because *ADPro* can be controlled by ARexx, you could write a script that instructs *ADPro* to load in a list of images, process each in turn and then save them back out to disk. (The details of this were covered in *Amiga Shopper* 28, 30 and 31 – a useful guide to what you can achieve with ARexx, even if you don't own *ADPro*. To order any of these issues, turn to page 90.)

What is an ARexx "Port"?

For ARexx to be capable of controlling an application, the application must feature what the techies call an ARexx "port". This acts as a sort of "back door" to an application that ARexx uses to communicate with it. Think of the set-up as a sort of telephone network, if you like – whenever ARexx wants to talk to an application, it simply dials the number of the application – the ARexx equivalent of a telephone number is the name assigned to the port; in the case of the *Virus Checker* program, for instance, the port name is **'Virus_Checker'**. If the program is on the phone (that is, has an ARexx port), then ARexx is able to communicate with it.

know the identifier number of a box in order to access it either, thanks to a selection of very useful functions that can return the identifier number of a box either by scanning through the document until you find the box you want or by asking the user to click on the box in question.

Once you've got the identifier number of the box, you can then perform any operation on that box simply by passing the box's identifier to *ProPage*'s functions. Right, so let's get stuck into a few *ProPage* functions to show what I mean:

STRING = GetForm(TITLE, LENGTH, FORMAT)
This very powerful function allows you to create your own custom-designed requester that will prompt the user to enter information that can then be parsed and used to control your *ProPage* Genie. The first parameter **TITLE** is simply a string of text that is used in the requester's titlebar. The **LENGTH** parameter, however, defines the length of the string gadgets, although it is possible to enter a string into a gadget that is longer that the gadget's maximum size.

The **FORM** parameter is slightly more complex because it defines not only the headings for each string gadget that will be displayed in the requester, but also the number of gadgets that *ProPage* should create. Although the headings are passed to the function as a continuous string, each heading must be separated by a carriage return (defined within ARexx as **'0a'x**). Finally, the strings that the user enters into your requester are returned and placed into the variable **STRING** (or whatever you choose to call it). As I mentioned earlier, the strings that you enter are all bunched together into a single string with each entry separated by a carriage return character, so you'll need to use the ARexx **Parse** function to split them down into individual strings. Here's a quick demonstration macro.

```
cr = '0a'x
form = "Surname"cr"Firstname"▼☛
cr"Street"cr"Town/City"
form = form cr "County"cr"Phone"

success = GetForm("Enter Your▼☛
Details",40,form)

Parse Var success surname▼☛
'0a'x firstname '0a'x street▼☛
'0a'x town '0a'x county '0a'x phone

Exit
```

This listing is very simple indeed. At the very start, it defines two variables – **cr** and **form** – which hold the carriage return character and the format of the string requesters that the **GetForm** function expects. Note how each string gadget heading is separated by the carriage return character. Once the format of the requester has been defined, the **GetForm** function is called, resulting in a requester containing six string gadgets being displayed on screen. You can then enter the required details, click on the 'OK' gadget and the macro continues. The strings that you enter are then placed in the variable **success** with carriage returns separating each entry. In order to access each entry separately, we can then use the **Parse Var** function to split the contents of **success** up into six separate variables.

BOX = ClickOnBox(PROMPT)
This function allows you to prompt the user to click on the box that you'd like your ARexx Genie to work on. The **PROMPT** parameter is simply a string that is displayed in the *ProPage* screen titlebar which informs the user what they should do. When the user clicks on a box, its identification number is placed into the variable **BOX**

PAGE = CurrentPage()
If you want to perform an operation on the current page, then you need to know the page's identification number. Not surprisingly, that's exactly what this function does – it returns the identification number for the current page which is placed into the variable **PAGE**.

Call SetPageColumns(PAGE, NUMCOLS, GUTTER)
How many times have you created a page in *ProPage* and then realised that you haven't defined how many columns you'd like *ProPage* to create for the page? With this function you can automatically create columns for your page without having to faff around with the 'Page->Alter->Current' requester. The function needs three parameters – the page identification number, the number of columns you'd like *ProPage* to create and the gutter setting (the space between columns).

It's worth noting, however, that *ProPage* doesn't automatically create a series of new linked boxes that run in line with the column guides that this function creates. You could, of course, extend your Genie further so that it automatically creates the boxes for you and then scales and links them accordingly.

call SetBoxAngle(BOX, ANGLE)
New to *Professional Page* v2.0 was the ability to rotate any box and the very latest version of *ProPage* allows you to perform this automatically through your ARexx scripts using the **SetBoxAngle()** function.

This function requires two parameters – the identification number of the box and the angle (in degrees) that the box is to be rotated. Here's a quick demonstration list that also makes use of *ProPage*'s **GetForm** function.

```
cr = '0a'x
form = 'Box Angle'

box = ClickOnBox("Select box▼☛
to rotate...")
if box = 0 then do
    call Inform(1,"No box▼☛
selected","Oh no!")
    exit
  end

angle = GetForm("Enter box▼☛
rotation angle...",4,form)
parse var angle '0a'x

call SetBoxAngle(box,angle)
exit
```

This listing is very similar to the one that we covered earlier, but is considerably more useful. Just like the first, it starts by defining two variables that contain the ARexx carriage return character and the format of the requester displayed by the **GetForm()** function.

Before we even start to think about rotating a box, however, the listing prompts the user to click on the box that they wish to rotate using the **ClickOnBox** function. If a valid box is selected, the variable will contain a value greater than zero. Just to make sure that a valid box is therefore selected, the macro checks the value held in the **BOX** variable. If it contains a value of zero (indicating that either the page or the pasteboard was selected), an error message is displayed on the screen using the *ProPage* **Inform()** function and the macro terminates.

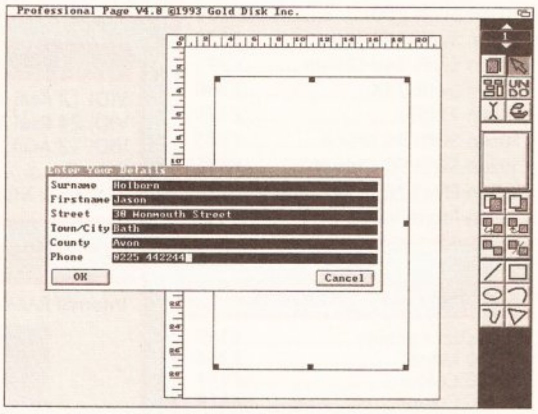
Now that we have the identification number of the box that the Genie is to process, a requester is displayed on the screen prompting the user to enter the angle that the box is to be rotated. The value returned in the **ANGLE** variable is actually a string value which is terminated by a carriage return character, so we then strip out this character using the same **Parse Var** function that we used in our first example listing. ARexx's variables are typeless and so even though the number is technically held in a string variable, ARexx will still treat it as a number when used in the appropriate context. There is therefore no need to convert it to a number first.

With both the identification number of the box and the rotation value safely held in ARexx variables, the macro finally rotates the box using the values held in the **BOX** and **ANGLE** variables. *ProPage* doesn't rotate boxes relative to their current angle and so even if the box has already been rotated, the starting point of the rotation is taken to be 0 degrees. If you therefore rotate a box that has already been rotated 45 degrees by a further 45 degrees no apparent change will be made.

BOX = DrawRect(X1, Y1, X2, Y2, BOXNAME)
Ever wanted to design a form in *Professional Page*? If you've already attempted such a task, then you'll know just how hard it is to get each box to line up correctly. Using ARexx, however, you can automate the process completely so that your own custom-designed forms are generated automatically. When used in conjunction with the **GetForm()** function, it would be perfectly possible to write Genies that give you the power to create some very impressive-looking forms with complete user control.

The **DrawRect()** function draws a rectangle onto the screen and automatically creates a box to hold it. The function expects four parameters along with an optional parameter **BOXNAME** which allows you to automatically name the box that the function creates. The first four parameters are pretty obvious – they simply define the top left and the bottom right corners of the box with the measuring system used by the current page. If you wanted to automatically group all your boxes together as the form is drawn onto the screen, simply use the **AddToGroup(BOX)** function.

Well, that about wraps it up for this month's look at creating Genies out of thin air and a little ARexx knowledge. As ever, experiment with the functions and see what you can get them to do – why not see if you can use the **DrawRect()** function to automatically create a *ProPage* invoice? It's worth a try! AS



ProPage's 'GetForm' function comes in very handy whenever you need to prompt the user to enter information that will then be used by your Genie.

WHAT'S ON OFFER?

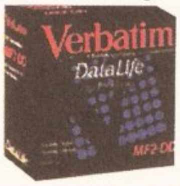
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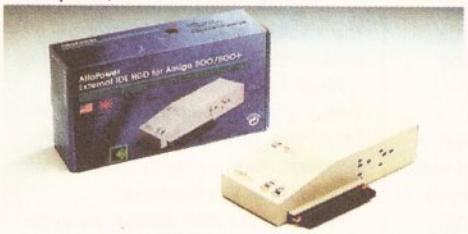


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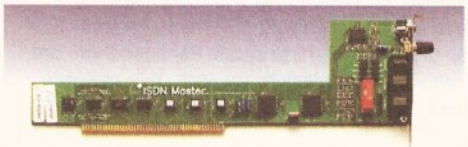


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Autoboot, Autoconfig and Zero wait states

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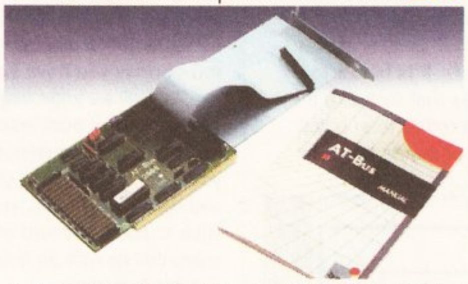
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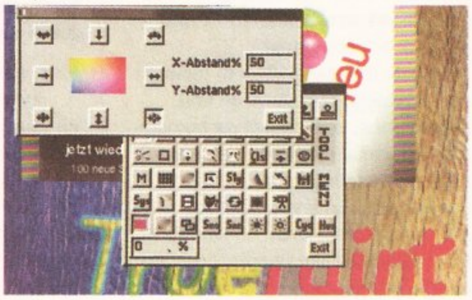
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Taking care

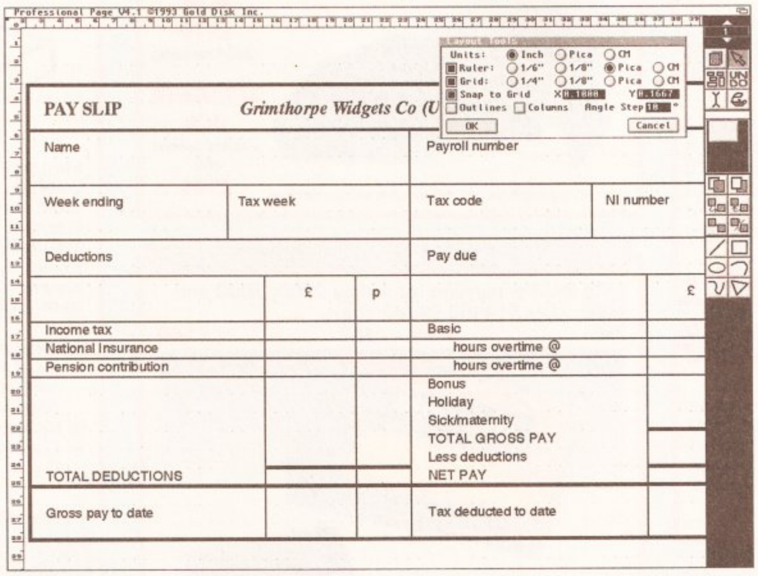
When you are running a small business you're often too busy earning money to worry about your "corporate image". But as Jeff Walker explains, a positive image is not only important – it's easy to achieve

An amazing number of people who run small businesses think their firm's image is a minor consideration; an opinion that could mean their business remains small for the rest of their careers.

Recently I was approached at a computer exhibition by a smartly-suited gent who proffered a business card. It looked like it had been made with a John Bull printing set (do they still make them?). This man wanted to do business with me, yet the first impression I got of him was that he was either too poor or too lazy to get a proper business card printed. Never mind how posh his whistle was, the tacky business card put me immediately on my guard.

In the same way, a letter printed on professionally-designed stationery carries far more weight, and has more chance of stimulating a positive response, than the same missive on plain paper.

While it is dangerous to base all your business decisions on first impressions, deep down we humans are superficial creatures and we can't help coming to such rash conclusions. So if you want to radiate a professional, confident, no fuss, business-like personality – you need a professional, confident, no fuss, business-like business card!

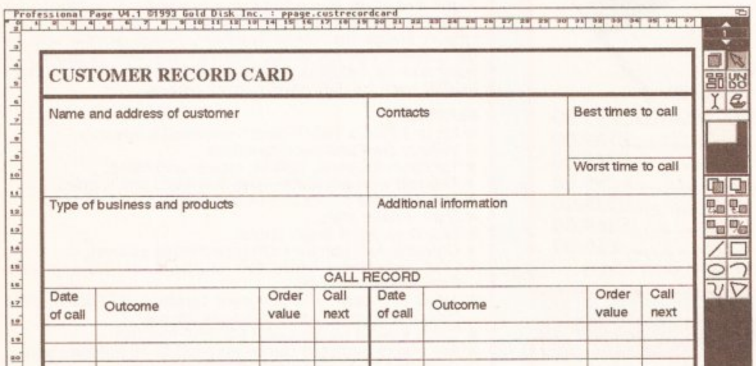


When designing your own business forms, it helps if you set your grid to 0.1in for X (one tenth of an inch) and 0.1667in for Y (one sixth of an inch). This is because this will match the 10 cpi and 6 lpi output you will be printing on to them, and therefore make it easier to position lines and boxes.

Indeed much the same is true of all your business forms – the more businesslike they are, the better the impression they will convey of you and your business. It is better to send out invoices that look like they ought to be paid rather than quick word-processed printouts on plain paper. And it's more effective if you reinforce your image by sending out a compliments slip with every letter or package, rather than than rub your hands together and smile about the few pounds you have saved.

As well as improving your image, well-organised business forms can help improve your performance. If you have a number of clients who you call, or call upon, regularly it's wise to keep a record of each and every call or visit so that details do not get forgotten.

Remembering that the wife of your contact is called Sarah and was in hospital giving birth last time you called could be important. Asking: "Was it a boy or a girl?" really could make the difference between an instant sale and a call-me-next-week.



Keep your business forms uncluttered and functional. Make sure there is enough space to write all the information required, and that they fit the envelope, file or card index system for which they are being designed.

LOOKS LIKE A JOB FOR...

There are hundreds of different business forms and you could spend a fortune buying them all, but armed with your Amiga, a desktop publishing program and a decent printer – you can quickly do it yourself. Very little design is involved because with business forms, less is more. Invoices, purchase orders, client record cards and the like are largely just a matter of boxes, lines and headings. The letterhead, card and compliments slip are a little more involved, but because the three are related, once the letterhead has been designed the other two are simple, five-minute jobs.

I've designed a few everyday blank business forms to give you an idea of how to go about it. There's an invoice and statement set; notice how the top half is almost exactly the same in both. And the same applies to the purchase order. How accurate the top of this form needs to be depends on whether you are using windowed or plain envelopes. For plain envelopes you can place your details, and those of the client, anywhere you like, but if you are using the windowed variety you must ensure that the name and address are in the correct position.

There are many different types of windowed envelopes, so you'll have to find the correct position by trial and error. The easiest way to start is to fold a blank sheet of A4 into three, put it in an envelope, then draw round the perimeter of the window on to the paper inside. Even then you probably won't get it right first time because of the different top and left margin offsets that different printers have, but it shouldn't take you too long to adjust it.

It is important to realise that for the invoice, statement, purchase order and pay slip, you are designing a blank form that you are almost certainly going to fill in with software other than your desktop publishing program. Your printer is probably set by default to ten fixed-width characters per inch across the page and six lines per inch down the page.

Positions across the page aren't such a vital consideration; no matter where you place columns and vertical lines on the form these can normally be adjusted for with tab positions. But lines, boxes and headings ranged down the page must keep to the six-lines-per-inch rule.

PICKING PICAS

The easiest way round this is to switch your DTP measurement system to picas. Because there are six picas to the inch, this matches exactly the six lines per inch of your

of business

printer. Use a 9 point font, something plain and businesslike, and set your line spacing to a fixed 12 points (12 points = 1 pica) so that every time you press <Return> you get the same effect as the printer moving down a line.

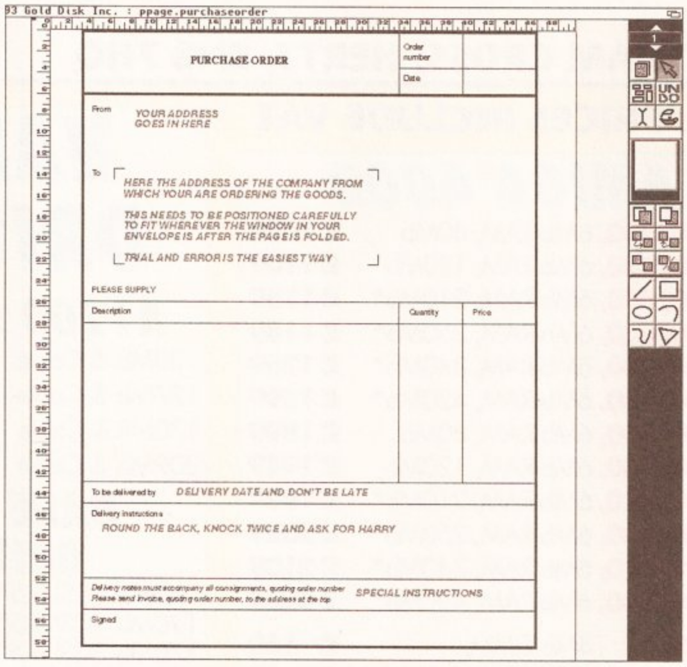
Keep well away from the edges of the paper. An inch margin all the way around your form will make it easier to work with than if you try to cover as much as the sheet as possible. At the very least leave a half-inch margin.

After the form is designed and printed you will need to get out your ruler and measure distances across and down to the various sections. An inch across the page is ten fixed-width printer characters; an inch down the page is six printer lines. If you intend to use a proportional font to print on to your form you will have to use tabs rather than spaces to position text across the page. Again, it might take a few tries to get everything lined up correctly.

The customer record card is not intended to be used with a printer, it is designed to be filled in by hand. I've designed a short card-sized form here, but you could also do it full length, punch holes down the side of the sheet and keep all your customer records in a ring folder rather than a card index box. Remember, this form is for making notes and memory-joggers, not for documenting the full conversation of every phone call.

You might be able to think of some other useful business forms. A "Things To Do" form is a good one for overworked people who can't keep all the important information in their heads. A daily organiser, much like the pages you get in some A4 diaries, might be useful if you regularly need to do certain things or be in certain places at certain times. And a professional-looking estimate form will be far more likely to win you the contract than a few figures scribbled on the back of a fag packet.

On the other hand of course, don't overdo the form-designing or you'll spend more time filling them in than you will working. If you do decide to start designing your own forms, ask yourself *before* you begin if it is really needed and, if so, why? And remember that the size of the form should be sufficient to contain all the information required, and it will also need to fit whatever envelope, file or card index system you are using.



If you are using windowed envelopes, positioning the box for the recipient's address can often be achieved more quickly by trial and error (drawing through the window) than by measuring with a ruler.

LETTERHEADS

Designing your company letterhead needs more thought than a few business forms. The focus, and most important part, will be the company logo – and that can be the big stumbling block. There are plenty of books on designing company logos you can refer to and by all means do so; I tell you this not as a cop-out or to persuade you to rush out and buy them all, but to illustrate that there is a lot more to it than five minutes with *DPaint*.

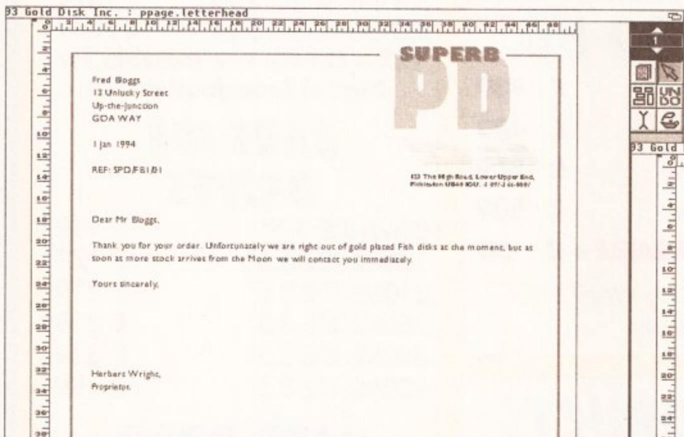
Most company logos are little more than the company name set in a distinctive font in a certain colour. Sometimes a simple design might be added to the name, but this isn't compulsory. A good rule of thumb when designing such logos is that the more complicated the image is, then the harder it will be for someone to recognise it quickly. An intricate and lovingly crafted logo has its advantages, but it could take a very long time to get it implanted in people's heads – stick to a strong, simple image wherever possible.

The usual temptation is to try to design something that describes, in visual terms, what your company is all about. This is fine if you sell only one thing or provide only one service; a plumber might use a tap as the basis of a logo, while a writer might use a pen. But most businesses are more complicated than this and if you use an easily-recognisable object in your logo you run the danger of being pigeon-holed. Our plumber might also be a skilled carpenter, but if his logo only features a tap, he won't get too many requests for his woodworking skills

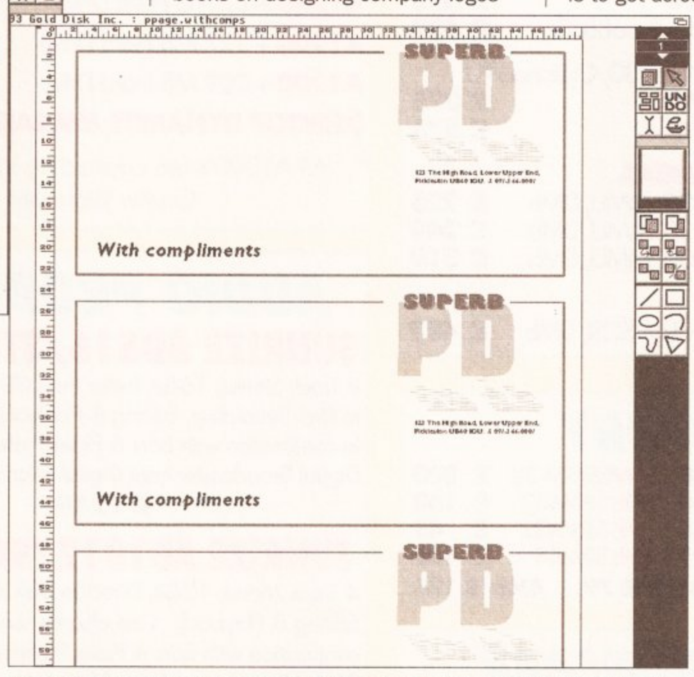
The main job of a company logo is to get across the company name. If at the same time you can put across a feeling of professionalism, low prices, fast service, or whatever impression it is you want to make – so much the better.

There are firms which specialise in designing logos that project a company image, but that's not to say you can't do it yourself. As a rough guide, traditional fonts like Times and Century Schoolbook tend to project traditional values and professionalism, while "clean" fonts like Helvetica and Univers also project professionalism, but

continued on page 80



A company logo should be distinctive and unique, but simple. Here the frame around the page is an integral part of the logo.



The compliments slip is essentially a short version of the letterhead. Prepare three on an A4 page and they can be guillotined after printing.

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It provides REAL-TIME, FULL MOTION, JPEG (50 fields per second) Capture & Compression, direct to hard disk. The video can then be edited and subsequently decompressed & played back in REAL-TIME, at 25 fps in broadcast quality, direct to video, laser disk recorder etc.. Also included on the board is full SMPTE timecoding, read & write. The card interfaces with the AD516 Studio 16, 8 track stereo and 4 track mono audio cards from Sunrize Industries to enable full audio (lip sync) to video. It requires an Amiga 3000 or 4000 with 68040 processor, large SCSI-2 hard drive, and fast SCSI - 2 hard drive controller.

Typical System:-

Amiga 4000/040 (2+16, 340Mb HD)
Digital Broadcaster 32 (Zorro III Card)
Fastlane Z3 (SCSI-2 Controller Card)
2.00 Gb Fast SCSI-2 3.5" HD (for video)
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Sunrize AD516/Studio 16 (Audio Card)
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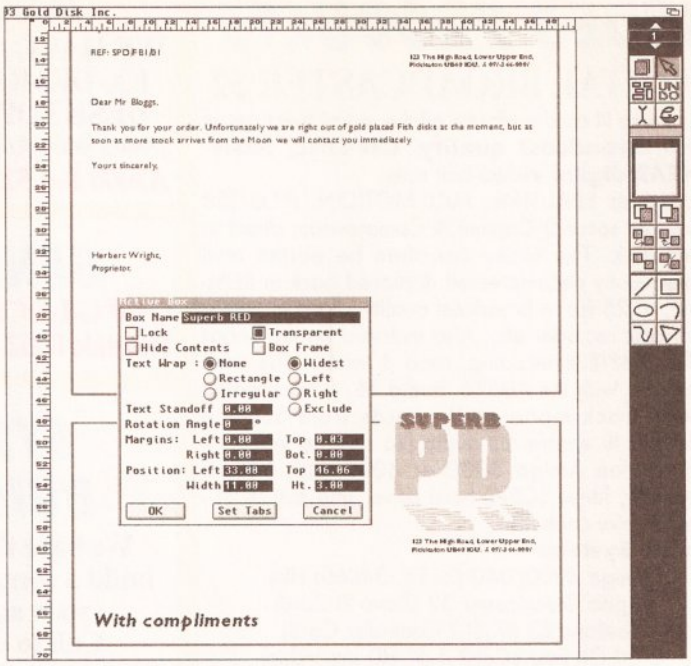
or by post, always phone first to verify price and availability, before sending your order to:

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PO BOX 2395, WALTHAM CROSS, HERTS EN8 7HQ

continued from page 77

with more modern values. A big, fat, extra bold sans-serif font might indicate longevity, stability and power, while a similar serif font could mean the same, but with some added softness – not so sharp around the edges, as it were. Thin fonts with clean strokes could be used to indicate subtlety and attention to detail, and so on.

But do remember that all this reasoning is very subjective and a typeface that looks different, exciting and cleanly meaningful to you, could look like a complete mess to someone else. If in doubt, stick to classical, well-known typefaces.



A "short" letterhead and a compliments slip can be combined on one A4 page. The compliments slip can be guillotined off after printing.

CHOOSING COLOURS

The colours you use are just as important. To take a simple example, using red, white and blue in your logo could put across a patriotic message. But like the design of the logo itself, less is more. Unless you are an expert on the use of colour it's safest to stick to using just three or four – and that's including black and white!

Where you put your logo on the letterhead is a matter of personal taste, but there are practical considerations. Stick it smack in the centre of the page and it is going to be difficult to write a letter around it. But think again. If your logo is in pale greys or pastel shades, you *can* slap it in the middle and safely write the letter over the top of it.

Most logos are positioned at the top of the page simply because that's where people start reading and usually want to know who it's from. It doesn't really matter whether it's top left or right. The space opposite the logo is the traditional place to print the recipient's name and address. But there's nothing to stop you putting a long logo sideways up the left or down the right, or all the way across the top or bottom.

I once received a letter that was on very thin paper with the logo printed in reverse on the back, so that it showed through the right way round. "This company is weird," I thought – and I was right. Another company I know of has a hollow rectangle as the logo with the company name along the top bar. For their letterhead they put the rectangle around the edge of the page and put the letter in the hollow bit. A little over the top but I recognised their style immediately.

Somewhere on the letterhead you are going to have to print your own address and phone number. Many companies position these details directly under the logo, wherever it is, while others put them along the foot of the page, often with a thin line above.

The font you choose for your address and phone number can also carry a message, just like the logo. But it doesn't have to. It is more important that the address and phone number can be read than that they should look pretty or project a specific message.

COMPLIMENTS & CARDS

Once the letterhead is finished, the compliments slip is a simple task. Merely shrink an A4 page to a third of its height and transfer the overall look of the letterhead on to that. You can then put three of these slips on to one A4 page so they can be guillotined at preset positions (exact thirds) into three slips. To be safe make sure there is a small amount of space between each.

But before preparing your compliments slips consider: how often do you fill a complete A4 page when writing a letter? Many business letters are just a few lines long – what a waste of paper! That's why the "short" letter was invented. This is two-thirds the height of an A4 page, and because it still has to be printed on to a whole A4 page, the bottom third can be used for a compliments slip, which is guillotined off after printing. If you do write a fair number of short letters, you can use this method to generate compliments slips at the same time.

The business card is a little more tricky because it is a lot smaller – possibly even smaller than your company logo so you'll need to scale this to suit. Similarly you might need to reduce the point size of your address.

Business cards do two things: they tell someone who you are and where you can be contacted, and they project both a personal and a company image. A bit of colour can make all the difference: one word picked out in red; a few blue lines; a pale marble-effect background... but be subtle about it. Too much colour looks ostentatious. If costs dictate that you stick to black and white, keep the card simple and leave lots of white space – if it gets too cluttered it will be harder to read.

Business cards come in many different sizes. Essentially you can make your card any size you like. I know one firm whose business cards are the size of postcards. While this might make them memorable, they are extremely cumbersome to carry around and impossible to fit into standard size business-card wallets. The maximum size for these wallets is 100mm by 60mm, and this would be a comparatively large card. Most are about 90mm by 55mm or 90mm by 50mm. For reproduction purposes you would have eight of them equally spaced on an A4 page or perhaps four on a landscape A5 page.

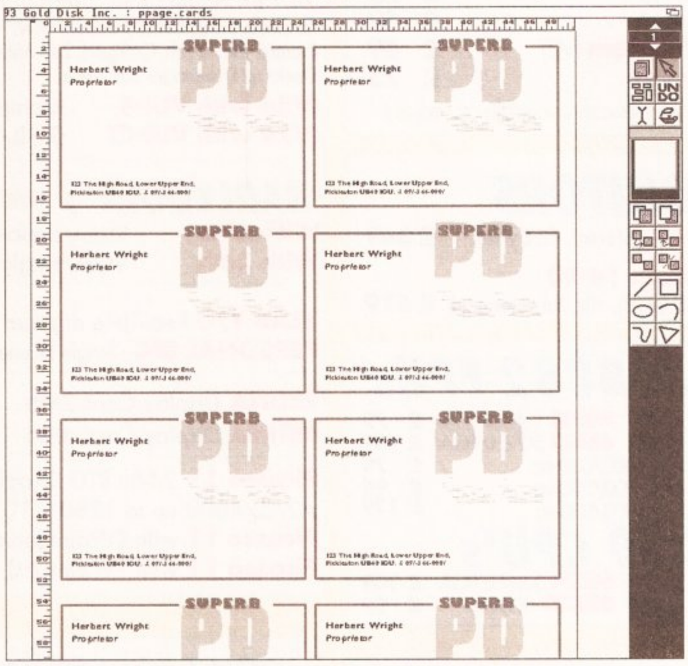
PRINTING

If your letterhead and compliments slips are just black, white and shades of grey, you can reproduce them at home on your laser or inkjet whenever they are needed. But pin printers, no matter how many pins they have, are not really up to the job. And if you want hundreds on quality paper it's best to take your original artwork to a local printshop.

The new colour Canon BJC-600 photocopier is definitely capable of reproducing colour letterheads and compliments slips on ordinary paper (the colour DeskJets, alas, don't print on to ordinary paper very well). But again, if you want a few hundred get them properly printed.

You can't really do your own business cards at home. If there were more output bureaux that recognised the Amiga as a valid desktop publishing platform life would be much simpler but, alas, this is not the case.

Providing the bureau with PostScript output is the way around this, but if you are using four-colour separations (process colours – cyan, magenta, yellow and black) as opposed to single specific colours, your bureau had better know all about screen densities and angles. There are no default values; it depends entirely on what is being printed and what machine is doing the output.



Business cards are best prepared either eight to an A4 page (as shown here) or four to a landscape, A5 page. This, of course, depends on what size of card they are going to be printed on.

The best approach is to prepare and print proofs of your artwork at home, then take everything to a bureau or firm of printers and discuss it with them. If they cannot tell you what you have to provide them with, go somewhere else. You'd be surprised at how many bureaux don't know anything other than what buttons to press. Happily there are many more who do know what they are doing – so finding one should be easy. AS

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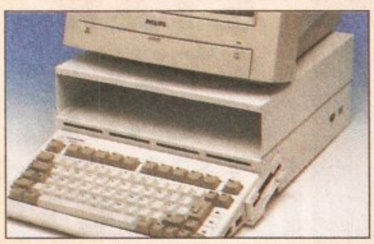
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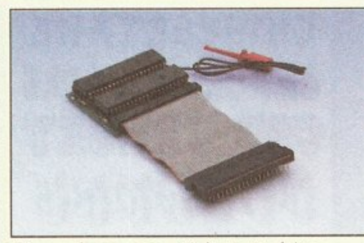
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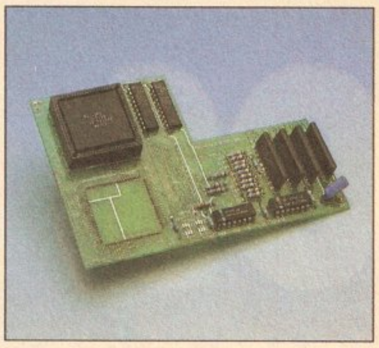
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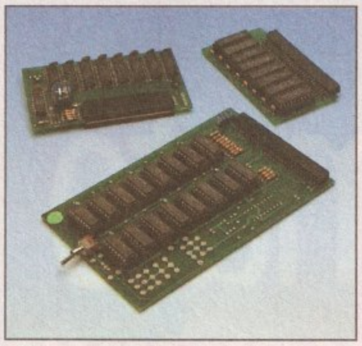
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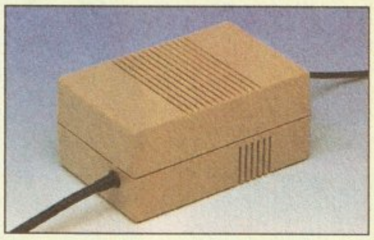
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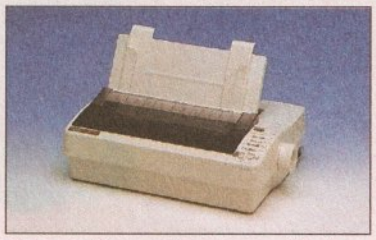
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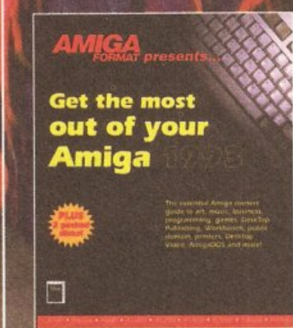
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This issue: user groups in the South and Midlands.

SOUTHEAST AND EAST

1–1 Amiga Club Postal software, ideas etc. SAE plus blank disk for details. Contact Peter Duckett, 11 Avon Close, Addlestone, Surrey KT15 1JO ☎ 0932 855834 after 8pm. Membership free. (AS34)

AmigaBASIC club Help for beginners and experts, plus free PD software. Membership £15. Contact: Imran Ahmad, 15 Weybridge Rd, Thornton Heath, Surrey CR7 7LN ☎ 081 689 9102. (AS36)

Amiga Club Newsletter, disks, PD etc. £10 membership. Send SAE for details to Imp, 190 Falloden Way, Hampstead Garden Suburb, London NW11 6SE ☎ 081 455 1626. (AS34)

Amigaholics Club Disk magazine covers PD, programming, music, art, DTP, and more. Free membership. Contact Kevin Bryan, 49 Coutts House, Charlton, London SE7 7AS ☎ 071-580 2000 Ext 240. (AS34)

Amiga Mania Bi-monthly publication (28+ pages). Public domain, licenseware, bargains, classifieds, free advice, free gifts, free disks. Annual membership £12. Contact D Cryer, 88 Blackbull Rd, Folkestone, Kent CT19 5QX. (AS34)

AmigaSoc PD, tips, cheats, MIDI, programming, disk magazine, all welcome. Free membership. Contact Neil Cartwright, 1 Chenies Way, West Watford, Herts. WD1 8UW. ☎ 0923 248483. (AS36)

Amiga Witham Users Group 85 Highfields Rd, Witham, Essex CM8 1LW. Tips and BASIC programs. K Anderson ☎ 0376 518271. (AS34)

Amiga Zone Bi-monthly publication with reviews, PD, AMOS, Workbench, news, coverdisk. £2 inc P&P, or £1.45 without disk. Contact Gareth and Raymond, 7 Swindon Road, Horsham, W. Sussex RH12 2HE. (AS34)

APDEG (Amiga Public Domain Exchange Group) Laser printing service, free PD, advice service, util disks for members, PD swaps. Contact Richard Brown, APDEG, 18 High Street, Mundesley, Norfolk NR11 8AE ☎ 0263 720868. Membership fee £6 a year. (AS34)

Beaconsfield and District CC Contact Philip Lishman 27 Russell Court, Chesham, Bucks ☎ 0494 782298. Meetings at St Michaels Hall, St Michaels Green, Beaconsfield 7.45–9.45pm. Programming, gaming swapping PD, having fun. Membership £10 for 6 months. (AS34)

Camberley User Group Lectures, competitions, advice, meetings, free membership. For more info contact F Wellbelove ☎ 0252 871545. (AS34)

Cambridge Sixty-Eight Group (CASE) SuperBasic, QDos, QL Emulator and QL software support on Amigas (serious users only). Meets 7.30pm, second Monday of each month, at Robinson Hall, Lolworth, Cambridge. Contact EPL Rowell, 347 St Neots Road, Hardwick, Cambridge CB3 7QL ☎ 0954 210692. (AS34)

Cheapo PD Club Non-profit-making postal PD, newsletters, advice. Membership £5. Contact Jason Meachen, Ivy Cottage, Chapel Road, Beaumont, Clacton, Essex CO16 0AR. (AS34)

Chic Computer Club Full details with an SAE to STAMP, Chic Computer Club, PO Box 121, Gerrards Cross, Bucks. For info contact Steve Winter ☎ 0753 884473. (AS34)

Computer Club A 16-bit club dedicated to being computer enthusiasts. Membership costs £15 per year. Contact 16 Laton Rd, Hastings, East Sussex ☎ 0424 421480. (AS34)

Enfield Amiga club Meet, swap, competitions, help for new users. For info contact Sean Clifton 32a Hoe Lane, Enfield, Middx ☎ 081 8042867 (AS34)

Hanover Computer Club DTP, PD, games, help, monthly meetings, beginners welcome. Free membership. Contact Colin Jones,33 Southover Street, Brighton, Sussex BN2 2UD ☎ 0273 602834. (AS36)

Hermit Computer Club Hardware help and information, program swapping. Meetings 7-10pm, Mondays. Membership £3 per term, 50p per night. Contact John Maynard, Hermit Centre, Shenfield Road, Brentwood, Essex CM15 8AG ☎ 0277 218897. (AS34)

Hertfordshire Amiga Users Group for beginners and experienced users. With BBS, PD library, programming, demos. Meets third Weds of each month at St Thomas Church Hall, Langley Rd, Watford. Contact Keith Alexander ☎ 081 421 1784. (AS36)

Kent Youth Computer Group Computer fair visits, video and DTP work, monthly newsletter. Membership 40p per month. Meetings at the North Youth Centre, Thursdays 7–10pm. Contact Jim Fanning North Youth Centre, Essella Rd, Ashford, Kent ☎ 0233 629804. (AS34)

Luton Amiga Users Group Help and advice, exchange of games and PD, fortnightly disk newsletter. Beginners welcome. Membership £5 per year. Contact Dave ☎ 0582 502806. (AS40)

Magic Windows Hardware projects, programming, PD, help and advice on all topics, beginners welcome. For more info send SAE to Frame, 26 St Benets Road, Stalham, Norwich, Norfolk NR12 9DN. (AS34)

Not the Night requires new members, coders in Assembler or C, GFX artists and musicians in any format (MED, PC/ST/NT etc). Beginners welcome. SAE for form to Andrew, 8 Lanark Road, Ipswich, Suffolk IP4 3EH. Membership £1.50 a year (goes back into the group). (AS34)

PD for Beginners Monthly mag on a disk + free PD progs. Contact M Macias, 48 Lavender Grove, Mitcham, Surrey CR4 3HU. Membership £3.60 for two disks (inc P&P). (AS36)

Robotronix Amiga Club Bi-monthly newsletter, tips, cheats, programming support, advice. Send SAE for details. Contact P Symonds, 36 Century Road, Cobholm, Gt Yarmouth, Norfolk NR31 0BX ☎ 0493 667161, Membership £15 a year. (AS34)

Rye Amiga Group Regular newsletter, swap/meet at the Rye Community Centre. Contact Oliver Campion, 71 The Mint, Rye, E Sussex TN31 7EW ☎ 0797 222876. (AS34)

Sensible magazine: reviews, tips, news, loads more. 50p or 20p + SAE. Contact M Street, 158 Hadleigh Road, Leigh-on-Sea, Essex SS9 2LP. (AS34)

Sittingbourne Co-op Computer Club Programming, PD, games, free write-in advice service. £10/year, £5 unwaged. Meetings Mondays 6–9pm at Mall beneath Regis Suite. Contact Andy, Unit 11, The Mall, 121–127 East Street, Sittingbourne, Kent ME10 4AQ ☎ 0795 842608. (AS34)

Slim Agnus PD library, BBS, advice from Amiga experts. Group meets the last Thursday of every month. Contact Philip Worrel, 115 Brocks Drive, North Cheam, Sutton, Surrey SM3 9UW. (AS34)

Southend Team Music, PD. Free membership. Contact Scotty, 52 Prince Avenue, Southend-on-Sea, Essex SS2 6NN ☎ 0702 333974. (AS34)

Twilight Advice on hardware and software, Fred Fish PD. Free membership, disks 50p each. Contact 13 Mavis Court, Ravens Close, London NW9 5BH. (AS34)

SOUTHWEST

Amiga Users Klub (Bodmin) Amiga computer workshops every Friday 7–9pm. Please write first with SAE – no stamp, no reply. Contact Jack Talling, 1 Windsor House, 19 Castle St, Bodmin, Cornwall PL31 2DX. Membership free (club now in fifth year). (AS36)

Ami-Info Interested in the serious side of the Amiga? Then send an SAE for details to Paul Caparn, Homeside, Higher Warberry Road, Torquay, Devon TQ1 1SF. (AS34)

Avon Micro Computer Club Desktop video, DTP, office applications and entertainment. Meet UR Church Hall, Muller Rd, Horfield, Bristol 1900– 2230, first and third Sat eve monthly. Contact Roger or Bob, 95 Downend Rd, Horfield, Bristol, ☎ or Fax 0272 311642. Membership £5 PA, then 50p per visit. (AS36)

Bournemouth Amiga Club Problems, fun, social beginners welcome. Free. Contact P Chamberlain, 36 Homeoaks, 30 Wimborne Road, Bournemouth, Dorset BH2 6QA ☎ 0202 296714. (AS34)

Bristol Amiga Club Disk-based monthly magazine: PD, reviews, news, help service, utilities, games, disk finder service, music specialists. 3 Parkstone Avenue, Horfield, Bristol BS7 0BX. Membership £10 a year. (AS34)

CHUD Free membership. Send SAE for details to Mr M Sellars, 103 Newward Rd, Bulford, Salisbury, Wilts SP4 9AH ☎ 0980 33154. (AS34)

EmuSoft PD, Utils, starting up help and advice to all users and programmers. Contact Nalpex, 48 Longhandstones, Cadbury Heath, Bristol BS15 5AP. Membership free. (AS34)

Exeter 16-bit User Group Programming. Andrew Deeley or Phil Treby at 25A Gloucestershire Rd, Exwick, Exeter, EX4 2EF. Meeting every Wednesday 7pm. Membership £6 per annum. (AS34)

Game Swap Club Swap original software and hardware. Membership £3. Contact Ade Ajidahun, St Andrews House, 125 North Road, St Andrews, Bristol BS6 5AH ☎ 0272 240399 (AS34)

MIDLANDS

Aden PD Advice and AMOS for beginners, cheats. Free membership. SAE plus disk to Den Rounding, 8 Primrose Lane, Miami Beach, Trusthorpe Road, Sutton-on-Sea, Lincs LN12 2JZ. (AS34)

BR & CJ Computer Club Regular disk mag packed with tips, reviews of games and serious software, game cheats database, demos and utils, very large PD library. Contact B Robinson at 23 Fairway Rd, Shepshed, Loughborough, Leicestershire LE12 9DS ☎ 0392 72889 or 03922 841296. Membership £1.25. (AS34)

Cacophony (Unlimited) Aims to create quality PD with AMOS and others. Help given. Mark Wickson, 49 Perrott Close, North Leigh, Witney, Oxon OX8 6RU. (AS34)

Coventry and Warks Commodore Computer Club Self-help, PD library, guest speakers, newsletter. Meets Christ the King Community Centre, West Hill Road, Coventry. Contact Will Light, 22 Ivybridge Road, Coventry, West Mid ☎ 0203 413511. (AS34)

Deluxe Cheats Disk User Group Software advice. Updates every 2 months! £4 for disk, £2 for updates. Contact Steven Frew, 96 Campden Green, Solihull, West Midlands B92 8HG. (AS34)

East Midlands Amiga User Group Self-help group for beginners and experienced users. Meets Willoughby Social Club, 7–10pm every Wednesday evening. Contact Richard Haythorn, 70 Felstead Road, Aspley Estate, Nottingham ☎ 0602 298075. Membership £5 a year. (AS34)

Hereford Amiga Group Help, exchange of PD and shareware. Membership free. Contact John Macdonald, Alma Cottage, Allensmore, Hereford HR2 9AT ☎ 0981 21414. (AS34)

Melton Amiga Users PD, serious, advice. No pirates. Beginners and experts welcome. Contact Stephen Mowbray, 68 Ferneley Crescent, Melton Mowbray, Leics LE13 1RZ ☎ 0664 63421 (evenings only). (AS34)

Shropshire Amiga Link Advice, monthly disk mag, PD. Free membership. Contact N Cockayne, 2 Dodmoor Grange, Randlay, Telford, Shropshire TF3 2AW ☎ 0952 591376. (AS34)

Sid The Kid Amiga Information on the Amiga 500, Plus, 1200. Free membership. Contact Sid Reeves, 75 Blossomfield Road, Solihull B91 1SA ☎ 021 705 8619. (AS34)

Software Exchange Service 13 Bournville Lane, Stirchley, Birmingham, West Midlands B30 2JY. For more info ☎ Michael Pun 021 459 7576. (AS34)

Solihull Computer Users Group PD swapping, tips, hints, news, etc. Contact Rich or Lee, 41 Leafield Road, Solihull, W. Midlands B92 8NZ. (AS36)

West Midlands Amiga Club Training, problem solving, general interest. Meets Telford Snooker Centre, Canongate, Oakengates, Telford, Shropshire, 7pm every Tuesday, £2 per week. Contact: Kevin Genner. (AS40)

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Your user group will be listed here free of charge for six months, then deleted to prevent defunct groups being listed indefinitely. The number at the end of each entry is the last issue in which that entry will be included. If you want your group's entry left in, just send in this coupon again a couple of issues in advance. PD libraries are now listed at the end of the PD section – this issue, page 103.

If you run a user group which isn't listed on this page, fill in the form below for your free entry. Send it to *Amiga Shopper* User Groups List, 30 Monmouth Street, Bath BA1 2BW. We reserve the right to refuse entries.

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AMOS action

Jason Holborn extends his on-going AMOS paint program with a number of new painting tools.

Assuming you have been regularly following the progress of our AMOS paint program over the past few months, you should already have a fairly decent version up and running. However, there are a few tools still to be added before it is complete, and these include the *DPaint*-like 'Brush' tool which allows you to pick up an area of the screen and then use it as a brush. But thanks to AMOS' powerful blitter object commands, incorporating this into our AMOS paint program isn't as complicated as it may first seem.

We won't just be adding the 'Brush' tool – below you'll find the full source code for the filled circle tool that we mentioned last month. So, without further ado, let's get stuck into this month's juicy section of code. Don't forget that if you're typing fingers can't take the strain, the full source code for *AS Paint* so far can be found on our coverdisk!

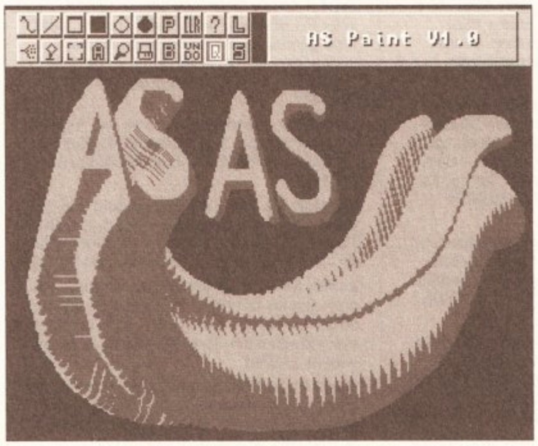
1 Before we can start work on the new routines, we need to add three new global variables. Three new variables are defined: **Grabbed**, **Func** and **Brushdraw**. **Grabbed** is used as a toggle variable that tells the brush draw routine when the user has already picked up a brush from the current screen, **Func** holds the number of the last selected drawing operation, and **Brushdraw** is used to indicate when the user stops drawing with the brush. This is necessary to ensure that the undo buffer is updated between each new drawing operation.

2 The main loop needs to be extended too. Each time it is executed the number of the currently selected operation is stored into the variable **'Func'**. This is necessary just in case the user selects a different tool.

3 After the main body code has been executed, we then check to see whether the user has selected an operation that is different from the one stored in the **'Func'** variable.

4 If it is, the variable **'GRABBED'** is reset indicating that if the user selects the brush draw function again, a new brush must be grabbed from the drawing screen.

5 Because we use a blitter object for the brush drawing operation, it remains on screen unless we turn it



With this month's source code in place, AS Paint is now able to pick up any area of the screen and then use it as a brush, thanks to the Amiga's blitter.

off. So it is turned off if a different drawing function is selected.

6 The **_PROCESSTOOLS** procedure needs to be extended as well, so that it will be capable of handling the new drawing functions that we have incorporated.

7 & 8 Remember the circle drawing function we covered last month? Well, this month we're adding the new filled circle draw function. If the user clicks on the gadget for this tool, the program jumps to our new filled circle drawing procedure.

9 & 10 If the user clicks on the **'Brush Draw'** icon, the program jumps to the **'_BRUSHDRAW'** procedure.

11 Remember the **'_CHECKICONS'** procedure that handles the processing of the toolbar gadgets? Well, this needs extending too. Two changes are necessary – the first of these checks to see if the tool that the user has selected is the same as the previous tool. If it is, the **'GRABBED'** variable is reset so that the user can grab a new brush when the brush draw function is already selected, simply by clicking on the brush draw icon again.

12 I've made a slight change to this line of code. The old version would automatically assume that if the user clicked on the **'Undo'** or **'Clr'** gadgets, then the toolbox would automatically select the freehand draw function once either had been completed. With the addition of the brush draw function, however, this isn't all that practical so I've changed it so that the last selected tool is selected again. First, however, the previous gadget is reselected.

13 Once this is done, the previously selected gadget is copied into the **'SELECTED'** variable so that it becomes the currently selected gadget.

14 Right, now that all the changes and additions have been made to our existing code, let's get started on the first new function – the brush draw function. The first thing we do is check to see whether the user has already picked up a brush by checking the contents of the **'GRABBED'** variable. If grabbed contains a value of zero, then no brush has been picked up.

15 Like all our previous drawing routines, we need to update the undo buffer so that if the user does something wrong, they can restore the picture to its unchanged state.

16 The brush draw routine works in a very similar manner to the box draw functions we covered last month. Because we're dealing with rectangular sections, the user can drag out a rectangle that marks the boundaries of the selected brush. We must therefore start by marking the origin of the rectangle by reading the 'X' and 'Y' co-ordinates of the mouse pointer. These co-ordinates are then automatically converted to the screen co-ordinates system which is needed by the blitter object drawing commands.

17 AMOS' bob grabbing command is very fussy indeed about the format of the parameters that are passed to it. The first two co-ordinates must be smaller than the second set. If not, your AMOS program will crash. Our routine gets around this problem by constantly monitoring the two sets of co-ordinates to make sure that the 'Get Bob' command is given legal values. The first of these checks is made to see whether we've already swapped the 'X' co-ordinates. This is indicated by the variable **'XT'** being set to one. If the 'X' co-ordinates have been swapped, they are swapped back so that we don't loose the origin co-ordinates when a new set of co-ordinates is read from the mouse pointer.

18 The second check is performed to see whether we've already swapped the 'Y' co-ordinates (indicated by **'YT'** being set to one). If they have been swapped, they are swapped back.

19 With the co-ordinates restored, a new set of co-ordinates is read from the mouse pointer and placed into the variables **'X1'** and **'Y1'**.

20 At the moment the co-ordinates are in their original form, so the two flags **'XT'** and **'YT'** are reset to zero.

21 The variable **'X1'** is used as the left hand co-ordinate of the box and therefore it must be less than **'X2'** if the 'Bar' command is to accept it. We therefore check to make sure that this is true. If it isn't, the two variables are swapped and **'XT'** is set to 1 (indicating that they have been swapped).

22 Just like the **'X1'** variable, the **'Y1'** variable must also be less than the **'Y2'** variable. If it isn't, **'Y1'** and **'Y2'** are swapped and the variable **'YT'** is set to one so that AMOS knows that we've swapped them.

23 With the co-ordinates checked to make sure that they are legal, a preview of the brush outline is drawn on to the screen and then removed after a vertical blank has occurred.

24 If the user lets go of the left mouse button, the brush co-ordinates are taken to be correct and a blitter object is grabbed from the work screen and placed into the Sprite bank as image number 1.

25 The variable **'GRABBED'** is then set to 1 to indicate that a brush has been grabbed from the screen and is now available for use.

26 The second half of this routine handles the drawing of the grabbed

brush on to the screen. The first thing that it does is check to make sure that the mouse pointer isn't over the toolbar screen. If this is the case, the drawing function is temporarily disallowed.

27 The routine then checks to see if the user has stopped drawing by checking the status of the mouse button and the **'BRUSHDRAW'** variable. If the variable contains a value of 1 and neither mouse buttons are being pressed, the undo buffer is updated.

28 The 'X' and 'Y' co-ordinates where the bob is to be pasted down are then read from the mouse pointer position.

29 Obviously there's little point in drawing on to the screen if the user is not pressing the left mouse button, so first we must check to see whether the mouse button is actually being pressed using the **'Mouse Key'** function.

30 If the mouse button is being pressed, the bob that 'floats' across the work screen is turned off to ensure that it does not interfere with our drawing operations.

31 Before we actually draw anything on to the screen, however, we first need to find out whether the user is just about to start drawing a fresh line of brushes. We do this by checking the contents of the **'BRUSHDRAW'** variable.

32 AMOS takes time to turn off the 'floating' bob so we give it all the time it needs by making the program stop for a single vertical blank before proceeding any further.

33 With the 'floating' bob removed, the undo buffer is updated.

34 The **'BRUSHDRAW'** variable is then set to one to indicate that the user is drawing on the screen using the currently selected brush.

35 The brush itself is then permanently pasted on to the screen using the **'Paste Bob'** command.

36 Just in case the **BRUSHDRAW** variable hasn't already been set, we ensure that it has by setting it now.

37 If the left mouse button hasn't been pressed, then a second section of code is required to allow the selected brush to 'float' across the work screen without interfering with it. Instead of 'pasting' the bob on to the screen (which makes it a permanent part of the bitmap), we use the **'Bob'** command so that it is automatically removed when the brush position moves.

38 If the mouse pointer is sitting over the toolbar screen, the 'floating' bob is turned off so that it doesn't interfere with the workscreen bitmap underneath the toolbar.

39 Phew! The brush drawing function is now complete and ready for use! Now let's move on to the filled circle drawing function, a slightly adapted version of the outline circle draw function we covered last month.

40 Before we start to draw the circle, we begin by checking to make sure that not only is the mouse pointer sitting over the work screen, but the user is pressing the left mouse button.

41 Once again, we make sure the undo buffer is updated in case the user makes a mistake.

42 The centre point of the circle is then read from the mouse pointer position and placed into the variables **'X1'** and **'Y1'**.

43 The routine then enters a **'Repeat...Until'** loop that is performed until the left mouse button is released. The first thing that this loop does is to read the radius of the circle from the mouse pointer.

44 AMOS's **'Ellipse'** command is just as picky about the format of its parameters as the **'Get Bob'** command, so we need to check to make sure that the two sets of co-ordinates that we pass are not the same. For example, if **'X1'** and **'X2'** were the same the 'X' radius value would be an illegal value of zero.

45 & 46 Obviously the radius of a circle is a value relative to the centre point of the circle and so we need to convert the 'absolute' values returned by the **'X Mouse'** and **'Y Mouse'** functions into valid 'X' and 'Y' radius values. We start by checking to see whether the value in **'X1'** is greater than the circle's 'X' centre point. If it is, **'X1'** is modified by subtracting the value of **'X2'** from it. If **'X2'** is greater than **'X1'**, however, the value of **'X1'** is subtracted from **'X2'** and placed into **'X1'**, to give us a legal 'X' radius.

47 & 48 The same procedure is then carried out for the 'Y' radius value so that the value held in **'Y1'** is a valid radius value.

49 The 'preview' of the circle is then drawn on screen and the program halts until the next vertical blank.

50 To stop the preview from becoming a permanent part of the workscreen, it is then removed using the same form of **'Ellipse'** command.

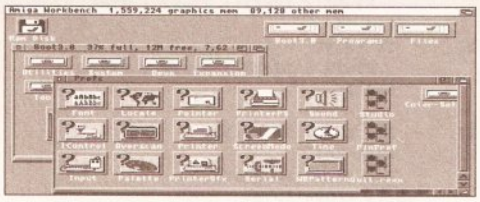
51 The **'Ellipse'** command insists that all four co-ordinates are different – if **'X2'** and **'Y2'** were to be the same, for example, your program would crash. The program therefore checks to make sure that all four

AGA EXTENSION ON ITS WAY

There was a time when AMOS was the only serious option for programmers who couldn't quite handle the thought of having to wade through more complicated languages like C and Assembler to produce the same sort of results, but times are indeed changing. Now that Blitz Basic 2 is out on the market (thanks to our friends on *Amiga Format*), many AMOS coders have found the thought of being able to program the AGA chip set and Intuition just too tempting to be ignored. If you're one of those planning to defect to the other side, then wait - I've got some really exciting news for you.

Europress Software have stated that Francois Lionet (the programmer of AMOS) had stopped working on AMOS now that both AMOS Professional and its compiler are out on the market. Although they had originally intended to produce an AGA extension, these plans were soon dropped. Many AMOS programmers (including myself) felt rather aggrieved by this; so much so in fact that I recently phoned Francois in France just to confirm that the AGA extension had indeed been dropped. What's more, I hoped to convince him to reverse the decision...

Francois is obviously not a programmer who leaves his public in the lurch. Although he was aware of Europress Software's plans, he assured me that as far as he was concerned, the AGA extension was going to happen whether 'Europress liked it or not'. Although he is currently still hard at work on Europress' latest product, Point and Click (a PC icon-driven games creator), he assured me that work would proceed on the AGA extension for AMOS Professional in January. Francois is aware of the threat that Blitz Basic poses to AMOS and is very keen indeed to get the AGA extension out as soon as possible. According to Francois the extension will allow AMOS programmers to open up 256 colour screens, use 256 colour bobs, create AGA rainbow effects and access the full 16.7 million colour palette offered by the chip set.



If you just can't bear to wait for the official Intuition extension, then the AMOS Club have some good news for you.

It seems likely that the extension will not be offered free of charge to AMOS coders, as was the case with previous AMOS updates. In order to keep Francois and his wife clothed and fed, a nominal charge of between £10 and £20 will probably be made. But as any serious AMOS coder will no doubt agree, this is a small price to pay for such mouth-watering features!

YET MORE AGA SUPPORT

Francois isn't the only programmer who is working on an AGA extension for AMOS. Nigel Critton, the programmer of the AMOS Club's brilliant 'Sticks' extension is currently putting the finishing touches to an AGA extension for the original AMOS Classic that not only offers full AGA support, but support for Intuition too. The extension was recently shown at the OZ-93 show in Belgium and according to Aaron Fothergill (head honcho at the AMOS Club), the sound of jaws dropping echoed throughout the exhibition centre. The demo showed AMOS displaying a full AGA screen which could be dragged down to reveal the Workbench screen running behind. The new extension will allow AMOS coders to perform the same Intuition-bashing functions offered by Blitz Basic – and much more besides.

The extension is to be marketed through Aaron Fothergill's AMOS Club and Aaron expects it to be available sometime after Christmas. Just to promote a little interest, a PD version of the extension is to also be released, and this will allow you to load and display AGA screens. Whether an AMOS Pro version will be released is unclear, but this seems likely too. Stay tuned for more news on both these exciting developments!

values are unique before proceeding any further.

52 AMOS doesn't actually have a command that can draw filled circles, so we need to make our own using a combination of the AMOS **'Ellipse'** and **'Paint'** (fill) commands. The paint command will only fill the entire circle if the background inside the circle is completely empty so just to make sure that we are working with an empty backdrop, the filled circle is actually drawn first into screen 6 (our spare screen which is used by the **'Undo'** function as a temporary storage area for the bitmap) which is cleared using the **'Clr'** command.

53 The first thing we need to do is to draw the outline of the circle using the **'Ellipse'** command.

54 Once this is done, the ellipse is filled using the same colour as the ellipse itself.

55 With the filled circle now complete in our spare screen, we need to transfer it to the work screen so that we can actually see it. This is done using AMOS' powerful **'Get Block'** command that grabs a section of the screen and stores it in memory.

56 The block we've just grabbed is pasted down on the work screen. The filled circle is complete!

The symbol ☛ means do not type a return – keep typing to the end of the next line. ☛☛ means type a space, then keep typing to the end of the next line.

NEXT MONTH!

We will be extending our *AS Paint* program still further, once again with the addition of a couple of new painting functions including both the 'Airbrush' and 'Screen Clear' functions.

In the meantime, I suggest you take the time to play around with the compiled version on the coverdisk. And make sure you have fun! AS

LISTING • LISTING

```
 ' *******************************
 ' **                           **
 ' **       AS Paint V 0.5      **
 ' **                           **
 ' **         Written by        **
 ' **       Jason Holborn       **
 ' **     For Amiga Shopper     **
 ' **                           **
 ' **   Revision Number : 6     **
 ' **                           **
 ' *******************************
 '
 SCRMOD=1
 CLOURS=9
 CURCOLOR=1

 Dim GADG(20,4),PALTTE(32)
 Dim CGADG(34,2)
 Dim BRUSH(9,8)

 Global SCRMOD,CLOURS,GADG(),PALTTE()
 Global CURCOLOR
 Global SELECTCOL,REDRAWCBLOCK,SCRYPOS
 Global XRATIO,YRATIO
 Global CGADG(),REDRAWCBORDER,NEWCOLOR
 Global BRUSHSIZE,BRUSH(),MOUSE
1. Global GRABBED,FUNC,BRUSHDRAW

 BRUSHSIZE=0
 '
 MAIN:
 _SCREENFORMAT
 _OPENSCREEN
 _TOOLBOX
 _INITUNDOBUFFER
 _INITBRUSHES
 '
 Repeat
2.   FUNC=SELECTED

   _TOOLDRAG
   _COLORSELECTOR
   _CHECKICONS[SELECTED]
   SELECTED=Param
   _CHANGEMOUSE

3.   If SELECTED<>FUNC
4.     GRABBED=0
5.     Bob Off 1
   End If
 Until SELECTED=19
 '
 End
 '
6. Procedure _PROCESSTOOLS[SELECTED]

7.   If SELECTED=6
8.     _FILLEDCIRCLEDRAW
   End If
9.   If SELECTED=13
10.    _GRABBRUSH
   End If
 End Proc
 '
 Procedure _CHECKICONS[SELECTED]
   Screen 7
   If Mouse Key=1 Then ICON=Mouse Zone
   If ICON<>0
     _HIGHLIGHTICON[ICON,SELECTED]
     If ICON<21
         SELECTED=ICON
11.      If SELECTED=FUNC
           GRABBED=0
         End If
       End If
     End If
     If SELECTED<>0
       _PROCESSTOOLS[SELECTED]
       '
       If SELECTED=18 or SELECTED=8
12.        _HIGHLIGHTICON[FUNC,SELECTED]
13.        SELECTED=FUNC
       End If
     End If
     Screen 0
   End Proc[SELECTED]
   '
   Procedure _GRABBRUSH
     Screen 0
14.  If GRABBED=0
     If Mouse Key=1 and Mouse Screen=0
15.    _UPDATEUNDOBUFFER

       Ink CURCOLOR
       Gr Writing 3

16.    X2=X Screen(X Mouse)
       Y2=Y Screen(Y Mouse)
       Repeat
17.      If XT=1
           XT=X2 : X2=X1 : X1=XT : XT=1
         End If
18.      If YT=1
           YT=Y2 : Y2=Y1 : Y1=YT : YT=1
         End If

19.      X1=X Screen(X Mouse)
         Y1=Y Screen(Y Mouse)

20.      XT=0 : YT=0

21.      If X1>X2
           XT=X2 : X2=X1 : X1=XT : XT=1
         End If
22.      If Y1>Y2
           YT=Y2 : Y2=Y1 : Y1=YT : YT=1
         End If

23.      Box X1,Y1 To X2,Y2
         Wait Vbl
         Box X1,Y1 To X2,Y2
       Until Mouse Key=0

24.    Get Bob 1,X1,Y1 To X2,Y2
25.    GRABBED=1
     End If
   Else
26.  If Mouse Screen=0
27.    If Mouse Key=0 and BRUSHDRAW=1
         BRUSHDRAW=0
       End If

28.    X=X Screen(X Mouse)
       Y=Y Screen(Y Mouse)

29.    If Mouse Key=1
30.      Bob Off 1
31.      If BRUSHDRAW=0
32.        Wait 1
33.        _UPDATEUNDOBUFFER
34.        BRUSHDRAW=1
         End If

35.      Paste Bob X,Y,1
36.      BRUSHDRAW=1
       Else
37.      Bob 1,X,Y,1
       End If
       Wait Vbl
     Else
38.    Bob Off 1
     End If
   End If
 End Proc
 '
39.Procedure _FILLEDCIRCLEDRAW
 Screen 0
40. If Mouse Key=1 and Mouse Screen=0
41.   _UPDATEUNDOBUFFER

   Ink CURCOLOR
   Gr Writing 3

42.   X2=X Screen(X Mouse)
      Y2=Y Screen(Y Mouse)
      Repeat
43.     X1=X Screen(X Mouse)
        Y1=Y Screen(Y Mouse)

44.     If X1<>X2 and Y1<>Y2
45.       If X1>X2
            X1=X1-X2
          Else
46.         X1=X2-X1
          End If
47.       If Y1>Y2
            Y1=Y1-Y2
          Else
48.         Y1=Y2-Y1
          End If

49.       Ellipse X2,Y2,X1,Y1
          Wait Vbl
50.       Ellipse X2,Y2,X1,Y1
        End If
      Until Mouse Key=0

51.   If X1<>X2 and Y1<>Y2
        Gr Writing 0

52.     Screen 6 : Cls 0

        Ink CURCOLOR
53.     Ellipse 160,128,X1,Y1
54.     Paint 160,128

55.     Get Block 1,160-X1,128-☛
Y1,X1*2+1,Y1*2+1,1

        Screen 0
56.     Put Block 1,X2-X1,Y2-Y1
      End If
    End If
  End Proc
```

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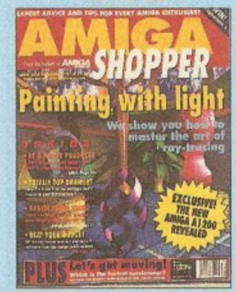
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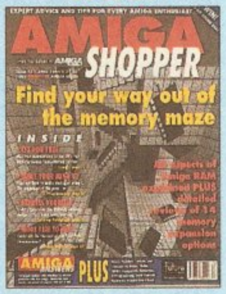
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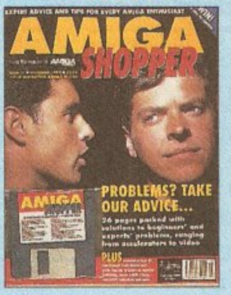
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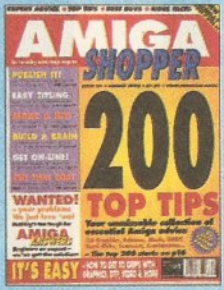
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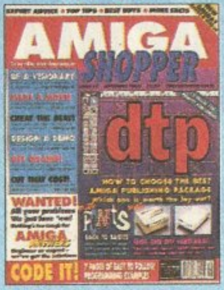
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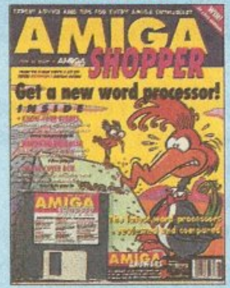
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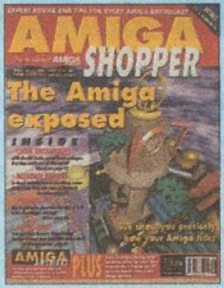
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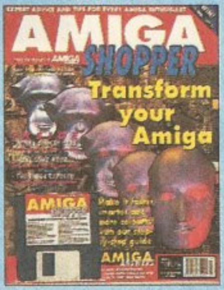
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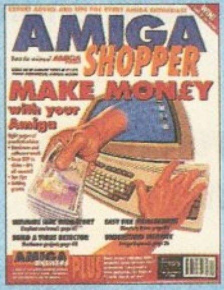
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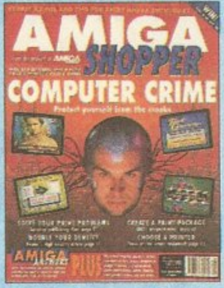
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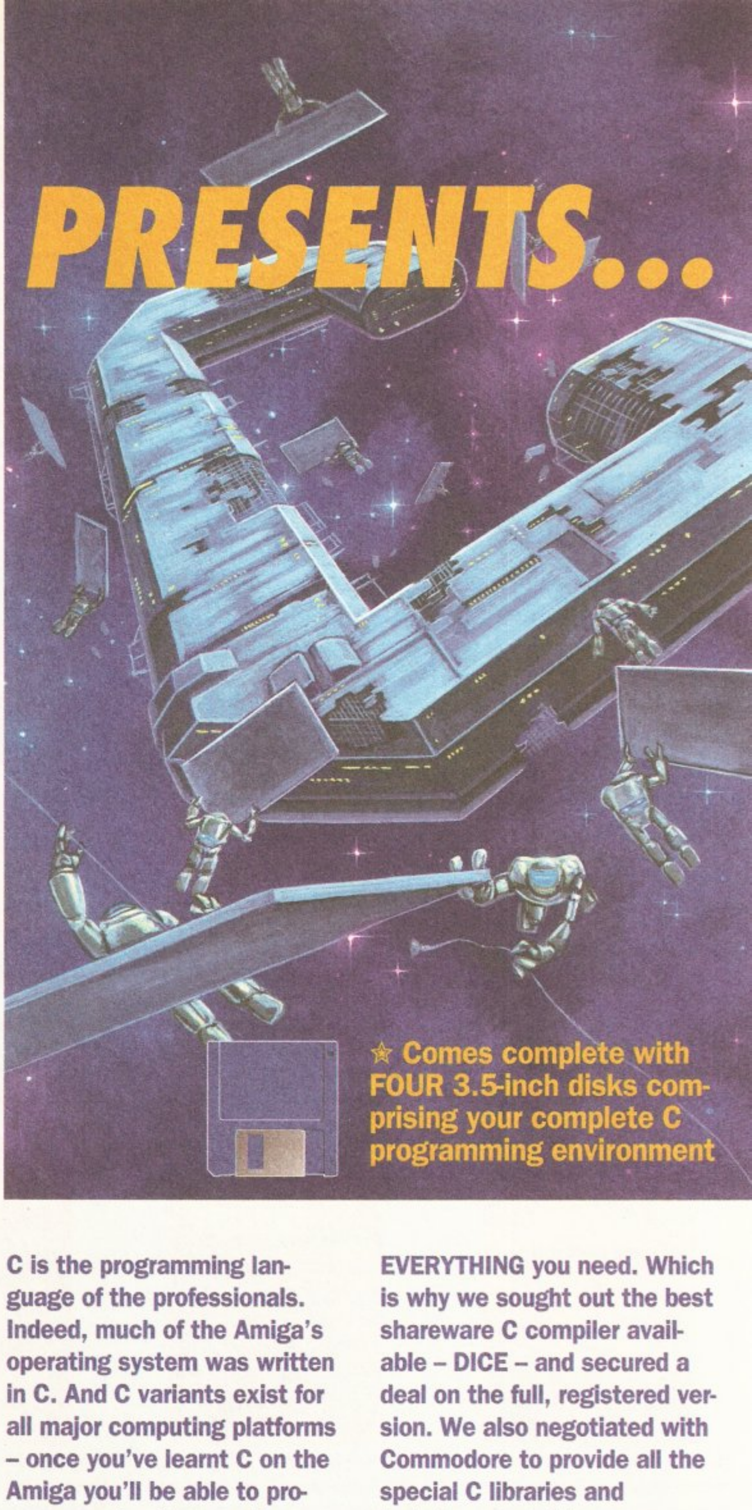
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"A VERY SILLY MISTAKE"

Having recently purchased a copy of the January issue of *Amiga Shopper*, I attempted to de-compress DICE as per your instructions in the cover-mounted book. I carefully typed in the line at the bottom of page 4 and pressed <Return>, after which I got the message: "Requires arp.library." I double checked that I had correctly typed the line and that the current device was df1:, which was the drive where I had put the cover disk.

Unless I am making a very silly mistake, it would seem that either your instructions or the de-archiving program are faulty. As I am a prospective customer for *Complete Amiga C*, this is not very encouraging. I await your reply with interest.

B Hunter
Ringwood
Hants

I'm afraid it is us, and not you, who have made a very silly mistake. The version of *Lha* (the de-archiving program) supplied with last month's cover disk, needs the **arp.library** to run. The file is in fact on the disk, but not in the right place. If you turn to page 9, you'll find the instructions for rectifying the fault printed at the bottom left of the page. Sorry!

"IT'S JUST A SHAME"

I write regarding the review of *Quarterback Tools Deluxe* in issue 31. I regularly buy your magazine and your sister magazine, *Amiga Format*. I would like to clarify which of the two reviewers is actually writing about the aforementioned program as there seem to be many differences between the two reviewers' opinions.

Firstly, you give the program a price tag of £129.95 and say it is produced by Meridian Software; *AF* prices it at £69.95 and says it is produced by New Horizons. Secondly, Gus Chandler rates the program very highly giving it a features mark of 9/10; Nick Veitch of *AF* gives it a paltry 1/5, saying: "Features: it's got 'em all, it's just a shame that they don't work some of the time." I'd be grateful if the two departments of Future Publishing could talk to each other and formulate one clear opinion on how this program operates as I don't relish the prospect of wasting £70 if it is a naff product.

Paul Filmer
Rochester
Kent

Meridian Software Distribution are the program's UK distributors; New Horizons are the American creators. The price we quote was correct, and has since been confirmed.

When Gus Chandler reviewed *Quarterback Tools Deluxe* for us he experienced no major problems with the software, and wrote his review accordingly. Nick Veitch, on the other hand, as his quote makes plain, had difficulty in getting some of the package's features to work, and hence gave it a bad mark.

Amiga Shopper and *Amiga Format* are independent magazines – if we were to formulate one clear opinion on a product, there'd be little point in us both printing reviews of it, would there? Try as we might to be objective, I'm afraid there will always be a certain amount of subjectivity in any review printed. The review of *Quarterback Tools Deluxe* was an extreme example.

"HOW LITTLE IS NEEDED"

I can't help noticing that Public Domain software seems to feature pretty heavily throughout *Amiga Shopper*. In the *Making Money With Your Amiga* feature in issue 28, I was surprised to find how little is needed to set up a PD house. Why doesn't *Amiga Shopper* open its own?

Such a venture would be immensely popular (or at least, it would be with me and I wonder how many other Amiga users would agree). It could supply all of the software reviewed in Public Domain World and perhaps even some essential commercial software. It would certainly save us a lot of trouble.

Ross McDonald
Warwick
Warwickshire

It's a very good idea, but the main thing standing in its way is the amount of time and effort needed to implement it.

As it stands, the cover disk is essentially a miniature PD library, and compiling just that one disk every month takes quite an effort. You will be seeing an improvement, in that we intend to tie the reviews in Public Domain World more closely with the programs on the cover disk – so that we can give you any programs that we think are especially good. But, sadly, you're not likely to see an *Amiga Shopper* PD house in the near future.

"CRIMINAL RECORD"

I have been interested in the continued debate on piracy and other illegal activities. However, one area never covered is the illegal use of modems, or more correctly the use of illegal modems on British Telecom lines.

Why do I bring this up? Well, being interested in getting a modem I made inquires and was shocked to discover how few people advertised that their modems were BT-approved. This leads me to believe that many people using modems are using illegal ones (including magazine writers). As so much is published about software theft yet *nothing* is written about this equally illegal use of modems perhaps it is time that people are made more aware of this problem.

Let's face it, the difference in price can be considerable, and how many people realise when they pay for a cheap modem that using it could result in their prosecution? What started out as a harmless hobby results in a criminal record due to ignorance! Everyone knows about the software law, but how many know about the modem law? Perhaps you could run a feature on this that would help to ensure less misuse of the system and perhaps encourage more BT legal modems.

James Abram
Wolverhampton
West Midlands

Thanks for drawing everyone's attention to this, James. I don't think there's any need to run a feature on the subject – you've said just about all there is to say on it.

If you *are* buying a modem, be sure to look for one with a BT-approved green circle sticker.

"OVER MY HEAD"

Being the proud owner of a shiny new Amiga 1200, I thought I'd buy your magazine to see if I could pick up some useful tips. Most of your articles go a bit over my head, to tell you the truth. Is there any chance of you aiming an article at absolute beginners?

Mrs Dalloway
Kensington
London

Yes – there's one going in the next issue. Details are on page 113. AS

IDEAL FOR ME



I am currently studying Computer Science at University. When I finish, I intend to start a career in computer journalism.

I understand that most of the writers who work for *Amiga Shopper* are actually freelancers, who work from home. This sort of arrangement would be ideal for me. So my question is, what would I have to do to become a freelancer for a magazine like *Amiga Shopper*? My own area of expertise is Pascal programming.

John Newman
University Of North London

The two main things you'll need are a decent grasp of the English language and knowledge of a subject (and the ability to find out any information you don't know) that people want to know about.

The best thing to do is submit a plan for an article, along with a sample piece of writing (make sure there aren't any mistakes in it) – that way the editor can judge whether or not you'll be a suitable writer. Allow a month or so for your your proposal to be read, and then call and politely ask if the editor wants you to write the feature. If you're lucky, you can then go on to negotiate a fee. Good luck!

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SOFTWARE for free

Interpreting the Tarot, yummy utilities, Amiga multimedia, disk mags... Ian Wrigley checks out the latest from the Public Domain.

Hi! Here we are again, with another month's worth of public domain, shareware and licenseware releases to look at. As I did last month, I'm going to ignore Fish disks this time and try (desperately) to catch up on all the other submissions that have been sent in.

I'm finally beginning to see the light at the end of the tunnel – so if you have written any software or you know of a good bit that I haven't looked at yet, now would be a good time to drop me a line. It's less likely to be at the bottom of one of those very large boxes dispatched to me from "Shopper Towers" – maybe it'll just be at the bottom of a large Jiffy bag instead...

CATT

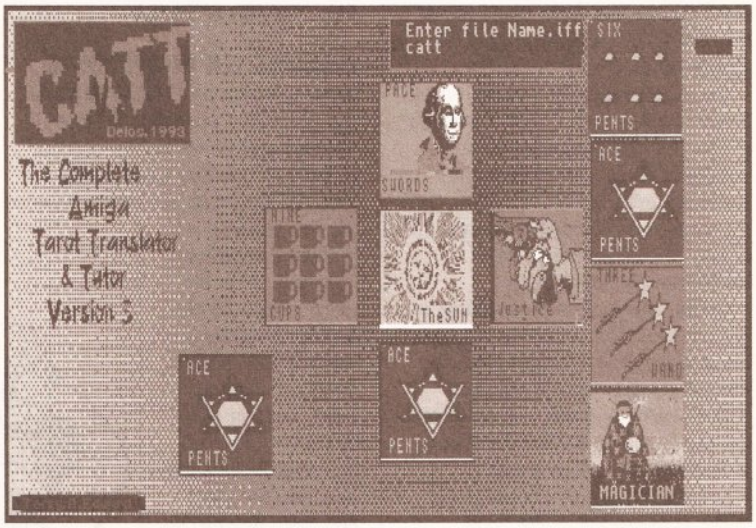
Central Licenseware disk CLE27

CATT stands for the *Complete Amiga Tarot Tutor* – so, as you'll guess, it's not a physics simulation. Rather, what you get is two disks (one program disk, one data disk) containing a Tarot generating program and a 'tutorial', which translates your Tarot hand for you. This second program can also tell you what any card is supposed to mean – hence its 'tutorial' label.

Double-clicking on the main program produces a disconcerting shimmering of the screen for rather longer than I was happy with. This is presumably *PowerPacker* or some other similar cruncher doing its stuff and expanding the program, but I'd be far happier with a cute little cursor changing shape, rather than my whole screen looking like it was sitting on the San Andreas fault.

Also, and this is a complaint that I have with a lot of programs, there's nothing to tell you that the program is preparing its data (or whatever it's actually doing). Surely it wouldn't be too hard for programmers to build in a little loading message – just "Please Wait" would do – rather than leaving it up to us to guess whether the program is working or our machine has bombed out.

Anyway, back to *CATT*. When things finally appear on the screen, you're shown a display with the space for ten Tarot cards: apparently the standard hand. You select your cards by clicking alternately on the right and left mouse buttons. Presumably this acts as picking the cards from a deck. When all ten have been selected, you may save the hand as an IFF file (although only to a disk called 'Castings', not to your hard drive unless you manually re-assign the logical device 'castings:'). Then the Tutorial section automatically kicks in, telling you what each of the cards mean – apparently it's not just the card, it's also the position in the hand it occupies that's important. You can use the tutorial program to analyse hands that you've saved earlier, and as I mentioned, you can get it to simply tell you what each card in the Tarot deck means.



Pick a card, any card – and it could reveal the dark secrets of your future. Well, that's if you believe CATT, the Complete Amiga Tarot Tutorial. Spooky!

The fonts that all this information is displayed in are perfectly pleasant and readable, and clearly the author, Terry Edward, has gone to a lot of trouble. The whole thing feels professional and robust, and didn't crash my Amiga once while I was using it – high praise indeed, considering some of the stuff I've looked at this month.

I must confess that I've about as much belief in Tarot as I have in... oh... blokes in top hats waving dead chickens around in graveyards at midnight. If, though, you do have a passing belief, or even just an interest, in the subject, *CATT* is about the best Tarot program that I've seen on the Amiga. Check it out.

BEGINNERS START HERE

What is PD?

PD is a general term which many people incorrectly use to refer to all freely-distributable software. In fact, PD (which stands for Public Domain) software or "freeware" is only one branch of this area; the other main one is shareware.

Essentially, freeware may be copied and used by anyone, although some authors place restrictions such as not allowing a PD library to charge more than a certain amount for the disk.

Shareware, on the other hand, should be treated more like commercial software. Although you are allowed to copy and pass around shareware programs, if you like one then you should pay the requested fee to the author – it's normally around £15 or less, and often entitles you to an upgraded version or a printed manual. Paying your shareware fees encourages software authors to write more programs – and if they don't, the Amiga scene will be a poorer place. Don't think that you're paying money for nothing, either – often hundreds or even thousands of hours of work have gone into creating a program, and it's only right that the programmer receives some reward for his or her hard work.

The third branch of software that we cover here is called licenseware. This is a form of shareware which is licensed to one (or more) PD libraries. In essence, when you buy a licenseware program you are buying shareware and paying the license fee at the same time. For this reason, you should treat any licenseware that you buy exactly as you would treat a piece of full-price commercial software – don't pass it around to your friends. You've only bought the right to use it yourself.

Can I pass other people copies?

Yes – that's the way that PD reaches a wider audience. Just make sure that you have followed the author's requirements for distribution. These are normally things like not charging more than a certain amount for the disk, not altering the program, or making sure that all the original documentation is included on the disk.

You can also pass on shareware – but not any registered copies of programs. If, when you pay your shareware fee, the author sends you an improved version of the program, then be careful not to give that out. Only pass on unregistered shareware.

You should not, of course, pass on licenseware – it should be treated in the same way as registered shareware.

RATING THE PROGRAMS

Just to be awkward, I rate the software that I review in two different ways, depending on what it is. Disk magazines, collections of clip art and the like are given a "value for money" rating, since you're essentially paying for one thing, or group of things, on the disk.

Single programs which appear in a collection of others, or programs which I've downloaded from bulletin boards, are given a "program rating", which reflects how good I think they are, taking into account usability, bug-proofness, my own particular tastes and so on. Both ratings are out of a possible 10 – a maximum only achieved by the very best.

(Incidentally, if there is something in that Voodoo stuff after all, then I'm terribly sorry about the tasteless reference to dead chickens earlier. Honest. I've seen *Live And Let Die,* so I know what they do to unbelievers.)
Program rating 8/10

WB2/3UTILS3
Kew=II disk W1080

Yep, another collection of utilities on one disk – but this is one of the better ones. The people at Kew=II clearly take some time making up their compilations, and if you don't have much in the way of extra widgets for your Workbench, you could do much worse than invest in this disk.

As usual for this type of disk, I won't go into too much depth about the contents, but here are the significant programs:

• *FracBlank.* A screen blanker, which draws 'plane fractals' (spiders' webs to you and me) after you haven't used your Amiga for a given time. There are two versions supplied, one for any Amiga running Workbench 2.0 or above, and one for users of 68030-based machines.
• *CxPak.* This is a useful package of five commodities, including *WDrag* which allows you to drag a window without going to its title bar, and *WSize* which (surprise, surprise) lets you resize windows without needing to find the appropriate gadget.
• *LazyBench.* A program launching utility, accessed from the Tools menu. It lets you launch up to 30 programs or tools without digging around on your hard drive for the original files.
• *HSV.* Why you'd want it I don't know, but this program gives you a colour palette containing both RGB and HSV (Hue, Saturation, Value) sliders. According to the author, adjusting the colours via *HSV* gives you a greater degree of user control: "tinting gently rather than colouring heavily". Hmmm.
• *MagicMenu.* As reviewed in issue 32 of this august journal, *MagicMenu* provides pop-up, 3D menus rather than the boring, standard Workbench versions. It also lets you select menu items without using the mouse, for the real keyboard junkies among you.
• *PPData.* A front-end for *PowerPacker,* which will let you crunch and decrunch PowerPacked data files. It's faster than the last shareware version of *PowerPacker,* so you may find it useful if you don't have a commercial version of the program. And finally...
• *GuiArc.* Again as reviewed previously, this is an Intuition front-end to archivers such as *LhA,* removing the hassle of having to remember just what all the stupid command switches were before you can create an archived file.

All of the programs on this disk that I've reviewed previously, such as *GuiArc,* have received ratings of at least 8/10, so it's fair to say that it's a pretty good collection. Some of the utilities are more useful than others, of course *(HSV,* anyone?) but on the whole, it's well worth buying if you want any particular utility on it.
Value for money 10/10

IMAGES OF CHRISTMAS
Roberta Smith DTP disk ACCA002

Ha! Just when you thought you'd finished with Christmas for another year! Well, this disk came along a little too late to go in the last issue, but I thought I'd mention it anyway. After all, many people go out buying Christmas cards in the January sales and storing them away for the next year (by which time they're creased, dirty and you can't find them anyway) so I thought that maybe you'd like to do the same with this disk (in other words, buy it then lose it, reformat it or use it as a coffee mat before next Yuletide).



Innit sweet? Roberta Smith's Images Of Christmas bring you seasonal clip-art straight out of the '60s...

The disk contains what seems like hundreds of different Christmassy images. Some are just the standard smiling Santa, others show couples holding hands sweetly as they gaze in wonder at the presents around the tree, yet others have doe-eyed infants looking up the chimney in expectation... you get the idea. The images are presented as a slideshow, which is annoying if you want to extract any of them for your own personal use, since their names aren't displayed when they're up on the screen.

I have to confess that I didn't sit through the whole slideshow – life's too short. Still, if you want some Christmas art, this disk provides it in abundance. It's well drawn (albeit in black-and-white only) and covers a fairly wide range. Me, I'm going to put strychnine in Santa's mince pies next year. Humbug.
Value for money 6/10

AMIGA PRODUCTIVITY SERIES NO. 2
Productivity PD

This is described as a "productivity multimedia package", and aims to give you a step-by-step tutorial in customising your Workbench. The authors say that it's aimed at beginners as well as more advanced users, although some of the instructions could do with some clarification if that's the case.

The two-disk set works as an autobooting disk-magazine affair, with a main menu from which other sections can be accessed. Each separate 'chapter' has a nice intro graphic in the form of a Workbench screen with some graphical extras (a pair of feet for "first steps", for instance), and from there you go to the actual scrolling text.

The tutorial starts off by telling you what you should already have on your Workbench disks, tells you to make a backup and then gives some ideas about which commands and files can be deleted to make some more room. Things like *PowerPacker* are covered, and all in all this seems like a pretty comprehensive course.

Because customising your Workbench requires, of course, that you have full control of your Amiga, there's the option to print out any section of the text – useful, and not something that all such products support. My one complaint is that I thought it would be nice to have the whole two disks-worth on my hard drive, so I double-clicked the 'HD Install' icon which is the only visible thing on the disks when they're inserted into your Amiga. However, although the install process is kind enough to let you choose which hard drive partition it will put things on, it then appears to install the whole contents of the disks – system, libraries, commands and all. This isn't what I wanted – I simply would have liked the tutorial itself. After all, I've already got a system (numerous, actually...) on my hard drive. I don't need another one!

Still, running the tutorial off floppies isn't a problem, and if you're not too familiar with Workbench and need a good basic course, or you know someone who does, then this two-disk set is well worth getting hold of. The authors have produced another such tutorial already – entitled Graphics & Sounds – and are working on a third, tentatively titled Hardware Peripherals.

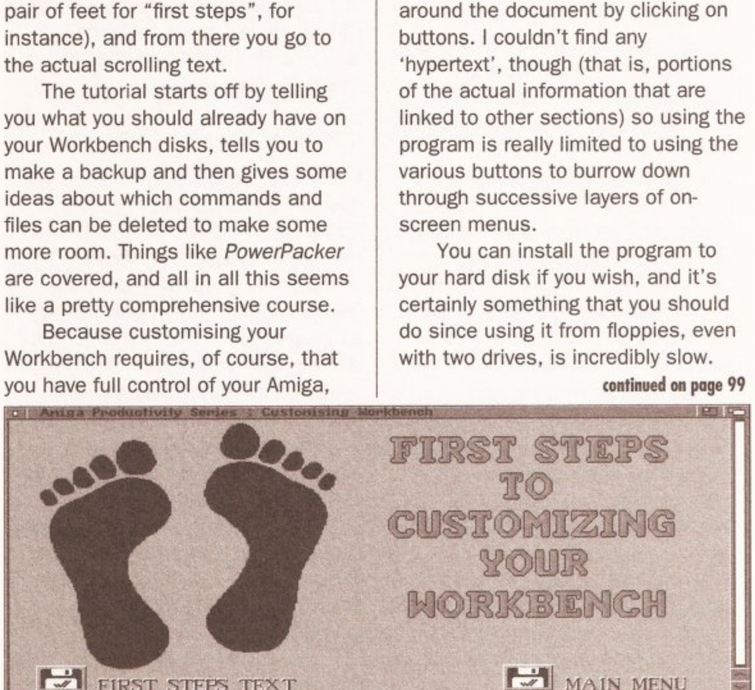
Each double-disk set costs £2.50 plus 50p postage and packing, and is available from Productivity PD, 51 Ennors Road, Newquay, Cornwall TR7 1RB.
Value for money 8/10

BASICALLY MEDICINE
Essex Computer Systems

This is a two-disk licenseware package called "a multimedia medical encyclopedia". It has been created using the *Hyperbook* program – which means that you navigate around the document by clicking on buttons. I couldn't find any 'hypertext', though (that is, portions of the actual information that are linked to other sections) so using the program is really limited to using the various buttons to burrow down through successive layers of on-screen menus.

You can install the program to your hard disk if you wish, and it's certainly something that you should do since using it from floppies, even with two drives, is incredibly slow.

continued on page 99



Customising Your Workbench, a disk-based tutorial from Productivity PD, helps you put your best foot forward in personalising your machine.

GET IN CONTACT!

If you've written – or discovered – any PD, shareware or licenseware that you think should be reviewed in these pages, or if you've got any other comments or suggestions, write to Ian Wrigley c/o *Amiga Shopper,* 30 Monmouth Street, Bath BA1 2BW. Alternatively, you can contact Ian on cix as 'iwrigley', or on the internet as 'ian@vampire.demon.co.uk'.

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U170 + Biorhythm V4.01 (A)
U177 + Electro-Cad V1.4 (A)
U181 + Video Note Pad (A)
U186 + Ultimate Disk Creator (A)
U191 + SID II(A)
U195 + Amibase-Pro II (A)
U198 + Scenery (A)
U220 + Amos-Paint (A)
U226 + 50 + Most Used Util (A)
U229 + Slide Const Kit (A)
U231 + The Game Tamer (A)
U233 + Speech Toy (A)
U237 + 8 Channel S'Tracker
U242 + Imploder 4.0 (A)
U250 + Video Tool (3) (A)
U255 + Graphic Converter (A)
U261 + Jam Disk (1-10) (A)
U284 + Copy & Crack Tool (A)
U287 + P.C. Q Pascal (2) (A)
U300 + Messy Sid II (A)
U311 + Power Logo (A)
U313 + Printer Utility 3
U321 + Graphic Util (6) (A)
U331 + Power-Menues (A)
U332 + Graphic Const Kit (A)
U334 + Emulator Col II (A)
U335 + Free Copy (A)
U337 + Model 3D (A)
U338 + Multi Visions 1 (A)
U339 + Multi Visions 2 (A)
U343 + Little Office (A)
U350 + Pool Tool (A)
U352 + Desktop Video (A)
U356 + Text Engine V3.4 (A)
U357 + Bon Appetit (A)
U358 + Star Cat 2 (A)
U363 + Disk Repair Kit (A)
U364 + Home Account (A)
U368 + Amicash (A)
U370 + Caption Machine (A)
U372 + Word Sort (A)
U376 + NCOMM II (A)
U377 + NCOMM III (A)
U383 + Lyapunov Generator (A)
U390 + Data Base Pack (A)
U391 + Fortran Language (A)
U394 + Protraker Vs 2 (A)
U397 + Form Unlimited (A)
U398 + Mortgage Calc (A)
U399 + Fracscape V1.2 (A)
U401 + Plus1 Issue (1-14) (A)
U420 + Speed Bench (2/3) (A)
U424 + Slidemaker (WB2/3) (A)
U425 + NIB 2 (A)
U427 + Printer Studio (A)
U430 + Sound Monitor (A)
U431 + Video Apication (2) (A)
U434 + Oracle (2) (A)
U442 + Sysinfo 2.56 (A)
U444 + Font Farm (A)
U466 + Grape Vine 12 (3) (A)
U477 + Quatermass Exp (2) (A)
U480 + Hard Disk Click (A)
U491 + Protracker V3 (3)
U495 + Hard Disk Util (A)
U505 + Salvage/Repair Kit (A)
U507 + DCopy 3 Proff (A)
U509 + Ultimate Btblock 1 (A)
U513 + Video Titler A (2) (A)
U516 + Amos Fractal (A)
U550 + Scenery Const Kit (A)
U551 + Assassin Boot Block (A)
U555 + Crossword Creator
U558 + Graphic Const Kit
U567 + Text Plus V.4 (A)
U568 + Icon Const Kit (2) (A)
U580 + Picture Box (A)
U581 + Magnetic Pages (A)
U584 + New Super Killer (A)

ANIMATION

A001 Walker 1 & 2 (2) (A)
A004 + Porky Pig (AGA)
A005 + Fillet The Fish (A)
A007 + Franklin the Fly (A)
A008 + Tron (2) (AGA)
A010 + Sculpt Anim 1 (A)
A013 + Space-Probe (A)
A017 + S.T. Fleet (A)
A019 + Stamp Logo Anim (A)
A021 + Coyotes Strike Back
A022 + Luxo Teenagers (A)
A025 + Cool Cougar (A)
A028 + Puggs in Space
A029 + Mike Tyson (A)
A033 + Fractal Flight (A)
A036 + Weird Science I (A)
A037 + Weird Science II (A)
A038 + Batman Movies (A)
A039 + Newtek (2) (A)
A051 + Dating Games (3Mb) (2)
A056 + Juggette II (1Mb) (A)
A059 + Pogo (1Mb) (A)
A060 + Walker 1 (2Mb) (2) (A)
A063 + Juggler II (A)
A064 + Newtek III (2) (A)
A066 + DBW Render (A)
A068 + Walker 2 (2) (A)(2M)
A070 + Donald Duck
A072 + Life a Bitch (18) (A)
A073 + Its Mental III (A)
A082 + Its Mental I (A)
A108 + Another World (A)
A115 + Vietnam Conflict (A)
A138 + Kylies A (20) (A)
A141 + Terminator 2 (A)
A150 + Madonna (A)
A151 + Top Gun (A)
A153 + Gulf Tribute (A)
A154 + Thunderbirds (A)
A155 + Rock Album (A)
A157 + Watership Down (A)
A158 Garfield (A)
A175 + Madonna SS II (AGA)
A178 + Kim Wilde Slides (A)
A179 + The Living World (A)
A187 + Peril of the Deep 1 (A)
A188 + Peril of the Deep 2 (A)
A190 + Terminator II (2) (A)
A193 + Nemisis Comic (A)
A195 + Real 3D (2) (A)
A197 + Star Trek (2) (A)
A200 + Mars Flights (A)
A202 + Fractal Anim (A)
A205 + Planet Side (A)
A207 + New Lemmings
A208 + Lady & the Tramp (A)
A209 + Mr Potatoes (A)
A211 Copter Flight (A)
A213 + Cannon Flight (A)
A215 + Madonna III (3) (A)
A218 + More Areotoon (A)
A220 + Showbiz Anim
A221 + James Whale Anim
A225 + 5 Way Kill Mole 2 (A)
A226 + New Viz (A)
A230 + Too Much 3D (A)
A231 + Aliens (A)
A232 + Beach Flight 1 & 2 (A)
A236 Whizzer & Chip (A)
A241 + Super Pic (1-3) (A)
A250 + Channel 42
A252 + Space Flight Anim (A)
A255 + Bart Simpson (3) (A)
A258 + Creep Show (A)
A260 + Freddy Dead (A)
A262 + Star Trek (A)
A265 + Let Me Out 1 & 2 (A)
A266 + Colour Cycle
A280 + Gif 1 & 2 (2) (A)
A288 + Saturn Fly By (A)
A289 + Reflection (A)
A290 + Christmas Anim (A)
A293 + Manga Comic (2) (A)
A296 + Cyclic Art (AGA)
A299 + Eric Schwartz (A)
A300 + Vista Pro (2) (A)
A302 + Cat Slideshow (A)
A306 + Tornado (AGA)
A311 + Colour Demo (A)
A314 + Scenery Anim (2) (A)
A317 + Rocking Robot (A)
A320 + Gore (AGA)
A334 + Dolphin Dream (A)
A372 + Rodens Anim (2) (A)
A375 + Moonshine (2Mg) (A)
A376 + 6 of 1 Prisoner (A)
A377 + Eight Slenz Out (2M) (A)
A378 + Sweet Revenge (2M)(A)
A379 + Predator (2)
A383 + Adventure Oscar (A)

STAR TREK anim

Agatron Vol 1-38

DEMOS

D001 + Space Ace (A)
D008 + Predator (A)
D011 + Multitasking (A)
D013 + Fraxion Revenges (A)
D016 + Dead Dance Thrash
D029 + Budbrain Mega (2)
D033 + Phenomena (A)
D035 + Thames TV Demo (A)
D050 Pink Floyd (6) (A)
D062 + Predators (2) (A)
D068 + Sam Fox Bibs Bobs
D076 + Contact Been Made (A)
D078 + System Violation (A)
D120 + 1911 Voyage
D152 + The Electric Touch
D154 + Virtual Real (2)
D156 + Kylies Demo (2)
D163 + Harlequin Demo (A)
D168 + Silence of the Lamb (A)
D180 + Cheap Movies Clip
D188 + Peace of Mind
D190 + Software Failure
D201 + Farts Demo (A)
D203 + Hidden Demo (A)
D205 + CDA Limelight (A)
D218 + Scream (2)
D225 + Deluxe Video III (2)
D234 Silence Expose (2)
D236 + Deluxe Photo Lab (2)
D240 + Anarchy

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MUSIC

M001+ Beasty Boys (A)
M002+ Michael Jackson (A)
M003+ Do the Bartman (A)
M005+ 100 C64 Tunes
M018+ The Xmas Song (2) (A)
M020+ Laurel & Hardy (2) (A)
M025+ Money for Nothing (A)
M026+ Walk on the Way Remix (A).
M029+ Safe Sex Demo (A)
M031+ Betty Boo(2) (A)
M040+ Secret PMs Ball (2) (A)
M058+Sgt Pepper Disk (2) (A)
M062+ The Rainbow Demo (A)
M063+Chubby Brown (A)
M072+Madonna (A)
M076+ Popeye (A)
M084+C64 Games Music (A)
M093+ Miller Lite (A)
M107+Flash Gordon (2) (A)
M115+Mahoney & Kaktus 2 (A)
M122+ The Yello Mix (A)
M123+Home & Away + Bread (A)
M125+ Addams Family (A)
M131+Kefrens Megamix (A)
M147+Bangle (A)
M150+Tiffany (A)
M153+Xmas Music Col (A)
M154+Kylies (2) (A)
M156+CD Player (A)
M158+DoctoringTardis (A)
M160+ I am too Sexy (2) (A)
M168+Rocks 'n' Roll (A)
M171+Madonna (Virgin) (A)
M177+Pet Shop Boy 4 Tune (A)
M184+Samfox (Please Me) (A)
M186+Madonna (Rescue) (A)
M188+Joe Le Taxi (A)
M194+Jesuc One's (2) (A)
M230+Now Music (1-15)
M262+A to Z C64 Tunes (4) (A)
M274+LSD Techno Warrior (A)
M276+Vivaldi 4 Seasons
M293+Bach Concerto 5/6 (A)
M314+Dick Tracy (2) (A)
M317+Freddy Rapp (A)
M318+Madonna Immaculate Col (A)

EDUCATION

E001+ Kids Paint (A)
E002+ Colour It (A)
E003+ Treasure Search (A)
E004+ Learn & Play I
E005+ Learn & Play II
E006+ Spanish Translator (A)
E007+ Education Graphics
E008 Mr Men
E009+ Astronomy (A)
E010+ Simon & Space Math (A)
E011+ Education Disk 1 (A)
E012+ Education Disk 2 (A)
E013+ Education Disk 3 (A)
E014+ Education Disk 4 (A)
E015+ Education Disk 5 (A)
E016+ Education Disk 6
E019+ Dinosaurs (A)
E020 World Database
E021+ Story Land II (A)
E022+ Language Tutor (A)
E023+ Talking Colouring (A)
E024+ Easy Spell II (A)
E025+ Scrabble (A)
E026+ Words (A)
E027+ Oswald (A)
E028+ Ariochs Astrology (A)
E029+ Ariochs Astrology (A)
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E35+ Chess Helper (A)
E36+ Basic Tutor (A)
E38+ Amiga Tutorial (A)
E39+ Postman Pat (A)
E40+ Guide to Back Pain (A)
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E45+ Petrol Engine (A)
E46+ Gas Turbine Engine (A)
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E52+ Fish Tank Sim
E54+ Demolit Mission (A)
E55+ Word Power (A)
E56+ Worm Hole (A)
E57+ Apple Catcher (A)
E58+ Maze & Crypok (A)
E59+ Verb Quiz (A)
E61+ King James Bible A (A)
E66+ Tarot A (A)
E67+ Tarot Disk (A) B
E68+ Gallow (A)
E69+ Treasure Trap
E70+ Math Drills (A)
E71+ Error Info (A)
E73+ Picture & Letter (A)
E74+ Amiga Begin Guide (A)
E75+ World War 2 (A)

CLIPART

CA01+ Colour Cartoon
C015+ FS Clipart (1-5)
C024+ Harlequin Vol1
C025+ Harlequin Vol 2
C026+ Harlequin Video 1
C027+ Dynamite Fonts 1
C028+ Amsoft Font Clip 1
C029+ Amsoft Font Clip 2
C030+ Various Fonts
C031+ Exile Font Clipart
C032+ Disney Clipart
C033+ Cosmic Clipart
C034+ Space Clipart
C035+ Gelenite Fonts (3)
C043+ Rip-Font & Logo
C044+ Colour Clip Art 1
C051+ Clip Art Vol (1-20)
C101+ IFF Pic Clipart (1-24)

FONTS

F001+ F5 Font (1-5)
F015+ Deluxe Paint Font 1
F016+ Deluxe Paint Font 2
F017+ Deluxe Paint Font 3
F018+ Deluxe Paint Font 4
F020+ Halc Font (3)
F023+ Computer Eye Font 1
F024+ Computer Eye Font 2
F025+ Fancy Font Volume 1
F040+ Digi Font Volume 1
F045+ Mega Font Volume 1
F050+PS Logo Font (1-9)
F070+ Pagestream Font (1-6)

SAMPLES

S001 Sample ST Vol (1-50)
S151 Mega Modules (1-6)
S171 House Samples A
S172 House Samples B
S173 House Samples C
S174 Noise Less, Mozart
S175 Korge Sample (3)
S201 ST Modules (1-40)
S401 NT Modules (1-3)
S501 Instrument (1-5) 1

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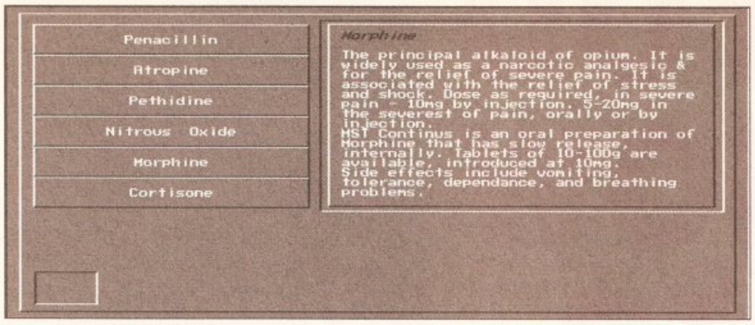
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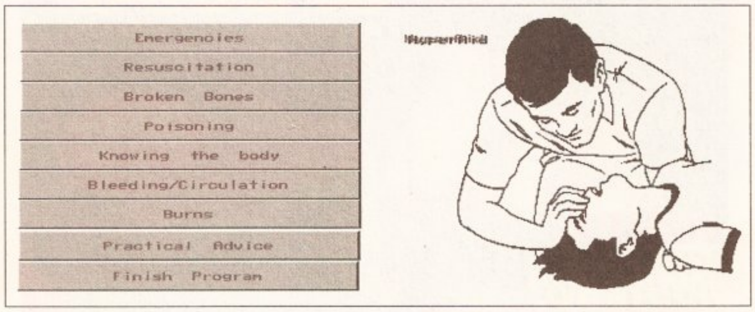


A prescription from the multimedia medical encyclopedia, Basically Medicine – not a program we'd recommend for hypochondriacs. Or should we?

continued from page 96

The authors of this work are members of the St John Ambulance Brigade (some of the profits from the disks go to that organisation), so their information should be pretty much on the ball; it certainly reads impressively, anyway. There's a large section on all sorts of pharmaceutical drugs, and plenty of information on diseases, medical procedures and so on. There's even an extra program called *HyperAid* which attempts to drum some basic first aid procedures into you.

Basically Medicine is probably a good program to buy if you're the sort of person who already has a "family doctor"-type book on the bookshelves. And, of course, no self-respecting hypochondriac should be without a copy. *HyperAid*, on the other hand, is something that everyone should check out. If you've no idea how to perform artificial respiration or to deal with burns (or even what to do if you see a traffic accident), then get hold of this two-disk set now. It could (as they say on those horribly socially-conscious TV programmes) save your life.



Everyone should know some basic first aid, so Basically Medicine includes a 'HyperAid' section, written by members of the St John Ambulance Brigade.

Basically Medicine is available from Essex Computer Systems (☎ 0268 553963) for £4.50, plus 75p postage and packing.

Value for money 9/10

AMIGAHOLICS ISSUE 13

Disk magazine

Ah, good old Amigaholics. This is now issue 13 of the disk and once again it's well worth checking out. According to the editorial it's two months late this time, caused by contributors being late with their copy apparently (what can they mean?). Still, it was worth the wait.

This issue there are articles on desktop publishing and comms, reviews of colour printers, books and hard drive backup programs, a *DPaint* tutorial, letters, an editorial, lots of contacts for Amiga fans to write to, adverts… oh, and something called "scratchpad", which seems to consist of several hundred lines of someone trying to persuade us that time travellers exist. Odd that, although I did like the thought that they must exist, and the BBC must acknowledge that fact – why else would weather forecasters spend so much time telling us what the weather was like today… All of this is packaged up in the usual professional-looking front-end, and all the text is displayed in one of the many variants of *MuchMore*, most people's text viewer of choice.

Also on the disk are a few programs and utilities including *ToolsDaemon*, along with an animation, some music, a few graphics and various other bits and pieces. It is nice to see that the disk actually lets you quit to the Workbench so that you can explore the extra items without having to reboot your Amiga – it's a shame more of the others don't do the same. The author, Kevin Bryan, says that the anniversary issue (number 15, which should be out in April next year), will be re-vamped to have a hard disk install utility, rather than coming on an auto-booting floppy. This sounds like a great idea to me, although people without hard drives will of course still have to use the thing from the floppy.

Of course, it helps that a couple of the letters mention Amiga Shopper in a favourable light, but even without that I'd be hard pushed to find an Amiga disk magazine that was more consistent and informative. Congratulations to Kevin Bryan on once again producing an excellent issue, and if you haven't discovered Amigaholics yet then send an SAE, right now, to Kevin Bryan, 49 Coutts House, Charlton Church Lane, Charlton, London SE7 7AS and he'll rush you the details.

Value for money 10/10

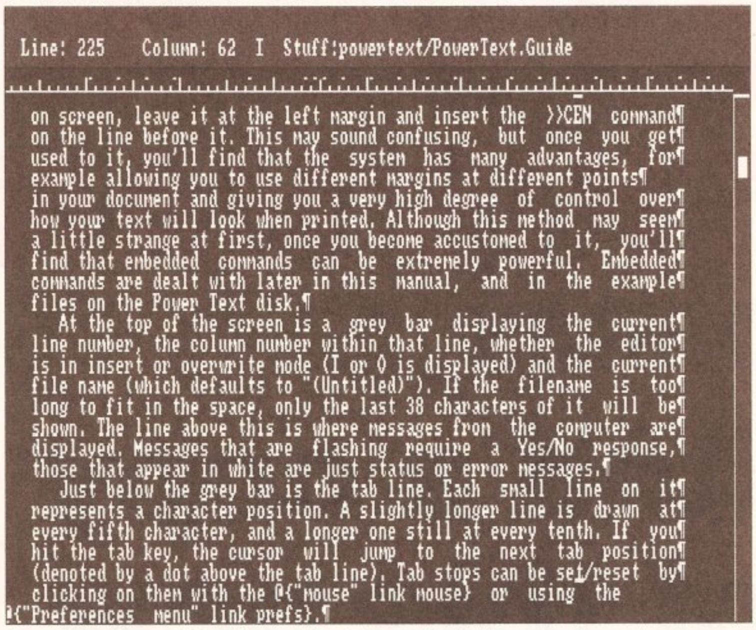


The top-value Amigaholics magazine includes brilliant animations, utilities, sound and graphics – like this rather excellent one of the world's fattest cat.

POWERTEXT II

Central Licenseware number CLU32

Centuries ago (well issue 18, anyway) I reviewed a word processor called *PowerText*, by Gary Stimson. I liked it enough to give it a 10/10



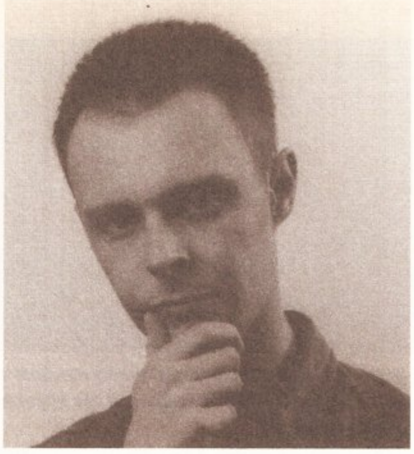
Sequel to the acclaimed PowerText, PowerText II is a superb word processor by anyone's standards. Who says you can't write applications in AMOS?

rating, and now it's been radically upgraded to its version II incarnation. This rewrite includes things like a Workbench 2.0-look interface, faster operation, a better spelling checker and numerous other things.

PowerText II is written in AMOS, and is an excellent piece of coding. Just about any feature you might want is there waiting for you, including many not found in just about any other PD, shareware or licenseware word processor. Indeed, *PowerText II* is a very powerful rebuff to those who sneeringly called AMOS an inferior language. There's nothing inferior about this piece of software!

There are way too many features to list, but a few examples include tab stops set simply by clicking on the tab ruler (no messing about setting them numerically); autosave of your document at user-specified time intervals; auto-insert of the date or time into your file; the customary macros (editable, of course); mail merging using files exported from a database; and quite simply one of the best spelling checkers I've seen – and I'm including commercial programs. It zings along through the file and allows you to replace a misspelled word throughout the document or just in the one case that it highlights at a time. Suggestions for replacement words are quick to appear, and there's even a "check as you type" option

ONE DAY YOU COULD KNOW AS MUCH AS THIS MAN



Cliff Ramshaw: The editor of *Amiga Shopper.*

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where the program will watch and point out any mistakes as you're entering your document.

Formatting is performed by the use of embedded commands: hit the <Escape> key and then the first few letters of the required command to set things like margins, typeface and so on. Styles such as emboldening and italicising are performed in a similar way. If you can't remember which command you need, belting the <Help> key will give you a three-page summary if you don't want to refer to the manual (which is supplied in PowerPacked text and AmigaGuide formats). Some people don't like this method of formatting a document – they prefer markers on the tab ruler or other similar ideas. However, in my experience embedded commands are just as easy to use once you've got the hang of them and they can give you much more control over the exact layout of your opus.

This is a superb program. It's certainly not just a "text processor" – this is a full-blown word processor. Indeed the manual suggests that you don't use it if you're going to be editing start-up sequences or writing programs and rightly so: use the correct tool for the job. If your job is word processing, then this is most definitely the right tool!

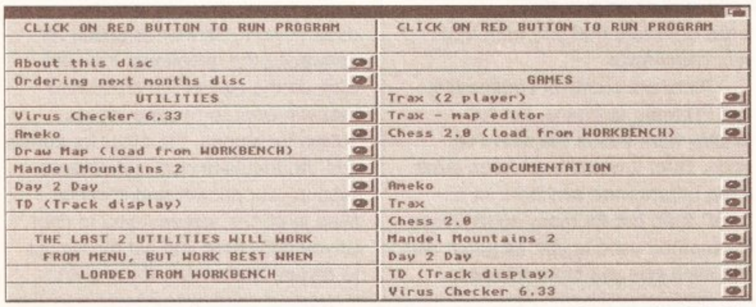
Finally, you may be surprised to see a screengrab of the program on these pages, because I normally complain that AMOS programs are ungrabbable. Well, in response to my complaint Gary specially altered the review version so that it would save an IFF image of its own screen. How's that for service!

Program rating 10/10

HOLMES BROTHERS ISSUE 4

Craig Holmes

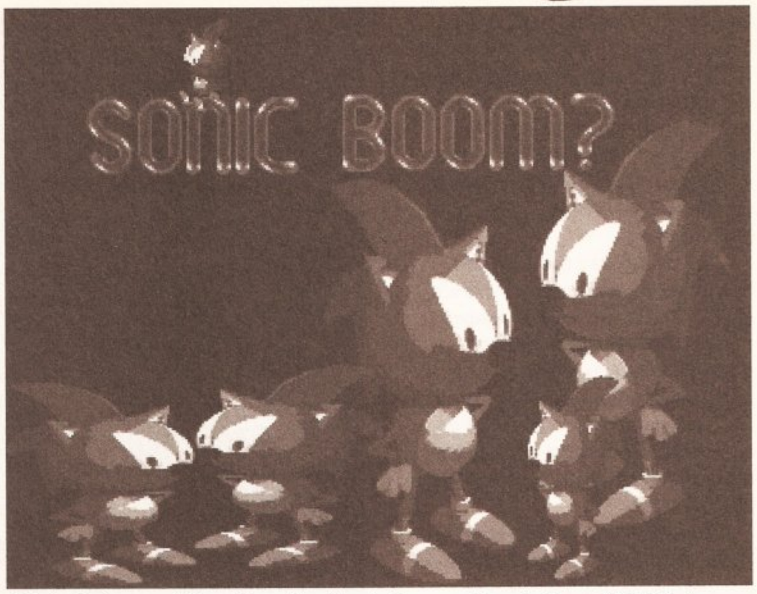
This disk from Craig Holmes is packed full of PD and shareware software. It's not really a disk magazine (the only "editorial" is a short introduction by Craig, and how-to-order details for the next disk) but it is autobooting and has a menu from which you can run the programs or read the documentation.



Much more than a magazine, Holmes Brothers issue 4 – a disk totally full of decent PD and shareware – makes a change from the usual run-of-the-mill PD.

And it really is packed – the disk reports itself to be "100 per cent used, OK free". Craig says that he started the series when he became fed up with receiving PD disks with only 10K used. I can understand that – it's frustrating to pay a couple of quid for a disk to find that it only contains one measly little program.

The programs on this disk range from utilities such as *Virus Checker* *6.33* (which could have saved my bacon if I'd installed it a month ago) and *Day2Day* (which calculates the number of days between two dates – should you ever wish to do such a thing), to 'novelty' items like *Ameko*. This draws a cat in a window; the cat runs around following your cursor wherever it goes. When the cat gets to the edge of the window it scratches at the border to try and get out, before scratching itself, yawning and going to sleep for a few seconds. It's cute, and guaranteed to fascinate small children for, oh... about fifteen seconds.



This is just one of the rather fine illustrations on Bounty issue 8. Well, I thought it was funny, anyway. If only the text was up to the same standard...

There are also a couple of games on the disk: *Trax*, an arcade-style offering based on the old Atari *Combat* cartridge, and *Chess* 2.0. But that's enough about games – this is *Amiga Shopper*, after all.

I must admit that I found the selection of programs on the disk a little strange at times – *Day2Day*, for instance, isn't going to set the world on fire. On the other hand, it can't be easy to find enough first-rate programs to cram a disk totally full, and maybe this program was the right size to fill up the last little gap. Anyway, since the disk only costs £2, it's certainly good value for money, if only to get a recent version of *Virus Checker* (as I discovered this month, it's a useful thing to have around...).

Issue 4 of the *Holmes Brothers* disk – or, indeed, the next issue when it appears – can be obtained by making a cheque for £2 payable to C Holmes, and sending it to Craig at 23 Rocester Avenue, Wednesfield, Wolverhampton, West Midlands WV11 3AU.

Value for money 9/10

BOUNTY ISSUE 8

Disk magazine

Bounty, says its authors, is a 'shareware' disk magazine. By that

VIRUSES? I'M SICK OF THEM!

I'd just like to take this opportunity to warn you – once again – that you really must have a decent anti-virus program running on your Amiga at all times. The reason that I'm saying this now is that I didn't – and I'm paying the price. Oh ho ho ho, I hear you cry, an Amiga software reviewer who doesn't run an anti-virus program! What a fool!

Well, you may be right. But in over a year of reviewing Amiga PD and shareware, I'd never experienced such a thing. I did have an anti-virus program running, but at some time in my Amiga's rather chequered history I must have removed it. And a virus struck – just on deadline (isn't it always the way?). Did I have an emergency Workbench disk with the reqtools.library or whatever needed to run anti-virus software? Did I heck. Could I use my comms program to download the latest anti-virus programs? Nope – it insisted that it couldn't find paths to the right places, since I hadn't started up from my hard drive in the first place (I couldn't – whenever I tried, a message appeared telling me that I'd been the victim of this virus and that it was going to trash my hard drive for me). I spent the best part of a night trying to find my way around the problem – although I was puzzled, since I'd even installed a new bootblock on the requisite partition of the hard drive and that didn't help.

In the end I found out what had happened – although it was totally by accident that I did so. Something had installed a new command into my C: directory, called 'pvr', and had modified my startup-sequence so that this was the first thing that the Amiga did on boot-up. Sure enough, this program, when I tried calling it, printed up the message and required a re-boot. So a quick edit and all was well – after I'd wasted an entire day.

Two types of people out there are probably laughing right now: those who would have checked the startup-sequence immediately, and those who wrote this nasty little piece of excrescence. To the first I'd say that I'm hardly an Amiga novice, but the fact that I've been lucky enough to avoid viruses so far has perhaps meant that such techniques aren't second nature. I did think of it early on, but panic tends to cloud one's thoughts somewhat, and I never quite got around to it. To the second type of person: if I ever meet anyone who has written a virus or a 'clever' little program like this, I'll take great pleasure in tearing you limb from limb. Slowly.

So, here are Ian's top three tips for PD and shareware users:

1. Always have an anti-virus program running.
2. Make sure that you have an emergency disk from which you can run a virus killer if something slips past your first line of defence and starts to trash your hard drive.
3. Check your startup-sequence to make sure that nothing foreign has found its way in there!

they mean that it costs £3 and is only available from one distributor. (All together now...) "But, according to those criteria, doesn't that mean that all disk magazines are 'shareware'?" Well yes, but up until now *Bounty* has been PD; this is the first issue that has actually cost its readers money.

The magazine comes on two disks, and is auto-booting. There's plenty of editorial, music, reviews and so on, although not a vast amount in the way of PD. On the other hand, there are some excellent pictures on the disk, and if you're interested in computer art then the disks are almost worth buying for the images alone.

Bounty is created by a team called "GBH". The documentation on the disks says that the team is available for graphics, music and written work. Well, although the graphics work is certainly well up to scratch (there's an excellent loading screen), I'm afraid that what let the disk down for me was the standard of the text.

There were just too many spelling mistakes, too much bad grammar and some frankly incomprehensible sections of text. Just running all the copy through a spelling checker before it was put on the disk would have improved things vastly – and I really do struggle to find an excuse for people not doing something as obvious as that as a matter of course.

Still, for the £3 that it'll set you back, *Bounty* makes an interesting read; the more serious section in particular is interesting and covers a wide range of subjects – issue 8, dated August, contains details on the CD32, a report on rumours of Commodore going bust (remember them?), details of *Emplant* (a Mac emulator), a feature on PCMCIA and a good bit more.

Bounty is exclusively available from Cynostic PD, Office 1, New Enterprise Centre, Little Heath Industrial Estate, Old Church Road, Coventry CV6 7NB. As I mentioned before, it now costs £3, and the catalogue number for issue 8 is D0189. (No doubt a newer issue is available by this time – check it out).

Value for money 8/10



One of the more Christmassy fonts on Eddie Barry's Blue Rose Fonts 3 collection – well worth getting if you need any kind of display font.

BLUE ROSE FONTS 3

Eddie Barry

Another Christmas disk that arrived too late to be featured in the Christmas issue but which I thought I'd take a look at anyway. It really is impressive: the fonts are "cut and paste" jobs rather than true fonts, and are intended to be used for video titling, display work, demos and the like. They have all been created in *DPaint* III and IV, and are displayed as a slide-show when the disk is auto-booted.

The font creator, Eddie Barry, really is to be congratulated on the standard of the artwork: it's as good as any commercial offerings I've seen, and the range of different fonts is such that you're bound to be able to find something to suit whatever you want to do.

Although the fonts are displayed on a graphical background in the slide-show, it's easy to isolate them for use in your own applications, since the "stencil" is included, which means that you can delete the background graphic while leaving the font in place. Then just copy the letter or letters that you want into your own image.

There are plenty of commercial and PD fonts available, but for display work this is the best I've seen. True, it would have been great if the letters were available as a "real" font, but for many applications the method used is just as good, and can even give you more freedom.

So, if you need display fonts, whether for demos, creating video captions, or just adding a title to a piece of artwork, you should definitely check out this compilation disk – and don't forget to ask whether there are any others available at the same time!

Blue Rose Fonts 3 is available from the Author, Eddie Barry, for £2. His address is: 33 Glenmore Walk, Hilden, Lisburn, N Ireland BT27 4RY.

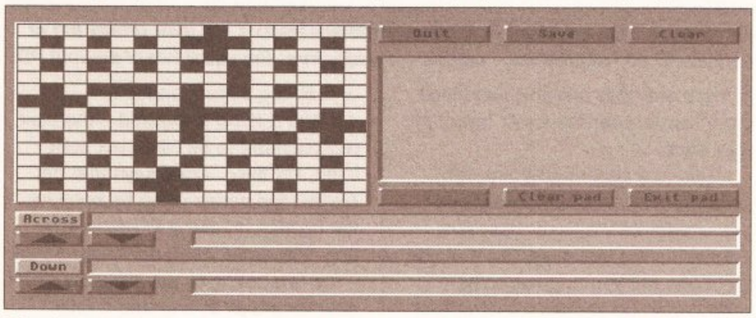
Value for money 10/10

D_SOLVE CROSSWORD

Various sources

This is a program that's being completed as I write, but it should be available from PD libraries by the time you read this. It's a simple concept – two cryptic crosswords which you can display and solve on-screen – but it's implemented in an elegant way.

The programmer, David Smith, has used Compiled AMOS to create the program which displays the crosswords and prompts you for your answers. The whole thing works very smoothly and looks good, with 3D-effect buttons and an uncluttered layout. There's a scratchpad area for jotting down notes (although for some reason the <Return> key doesn't work) as well as space for answering the questions. You just click on the part of the crossword that you want to try (one mouse button for across, the other for down) and the requisite clue is displayed. Type in your answer and it will be filled in on the screen if you're right. Or you can cheat and get the Amiga to display the answer if you prefer...



Thanks to D_Solve, the paper and pen are now officially redundant, because at last you can fill in the crossword while you're sitting at your computer.

Two crosswords are supplied on the disk and for £1.50 plus a blank disk David will send you another two.

Quite why you'd want to do the crossword on your computer rather than scribbling all over your daily paper I don't know, but if the idea appeals then this is a good, robust program that does the job well.

Program rating 8/10

WHERE TO GET IT

There are two main ways to get hold of Amiga PD and shareware: from a bulletin board or from a PD library.

The advantage of using a bulletin board (BBS) is that often the latest software is uploaded as soon as it's available. On the downside, you need a modem to connect, and you'll have to pay phone charges (and sometimes a connection fee to the BBS as well).

There is a growing number of BBSs with a wide range of Amiga software available for download. Check out 01-for Amiga (☎ 071 377 1358) and the Cheam Amiga Bulletin Board (☎ 081 644 8714). Another good option is joining CIX (the Compulink Information eXchange), which not only has Amiga software but also contains conference and file areas on a wide range of subjects. Many of the *Amiga Shopper* writers have accounts on CIX, so you can get first-hand advice on your problems, too. For more details, call CIX on ☎ 081 390 8446 (voice) or ☎ 081 390 1255 (modem).

If you don't want to use a BBS or haven't got a modem, the other way to get PD software is from a PD house. Many advertise in *Amiga Shopper*, and there's a full directory overleaf. Expect to pay between 99p and about £2.50 per disk – there's often a discount if you buy in bulk, too. As for the difference between companies which charge 99p and those which charge £2.50 – well, try both types. There are brilliant, totally professional PD houses which charge less than a quid, and total incompetents which charge more than twice that.

UK PD HOUSES • UK PD HOUSES

***An asterisk by a library's name means see its advert in this issue for further details.**

A1200 Only PD. Contact B J Cowdall, 27 Pheasant Way, Cirencester, Glos. GL7 1BJ.

AMOS PD, 1 Penmynydd Road, Penlan, Swansea SA5 7EH.

Amiganuts United, 1 Daffern Avenue, New Arley, Coventry CV7 8GR.

Amiga Productivity PD Series, 51 Ennors Road, Newquay, Cornwall TR7 1RB. Contact M J Docking.

***Anglia PDL,** 30 Victoria Street, Felixstowe, Suffolk, IP11 7EW, ☎ 0394 283494.

***Anim1 PD,** 2 Fatherwell Avenue, West Malling, Kent ME19 6NG.

Armchair PD, 180 Blackton Close, Newton Aycliffe, Co Durham DL5 7EY.

Artman, 40 Northwell Gate, Otley, West Yorkshire LS21 2DN. Phone ☎ 0943 466476.

Asgard PD, 20 Langdale Drive, Flanshaw, Wakefield WF2 9EW. Phone ☎ 0924 363059.

Batty's PD. Contact Ian or Lynn Battison, 7 Denmark Road, Northampton NN1 5QR. ☎ 0604 22456. Life membership £3.99.

Beats Brothers, 6 Brownings Close, Pennington, Lymington, Hampshire SO41 8GX.

Belshaws PD. 55 Baldertongate, Newark, Notts. NG24 1EU, ☎ 0636 72503.

BG PD, 6 Peter Street, Whitehaven, Cumbria CA28 7QB.

Blitterchips, Cliffe House, Primrose Street, Keighley, BD21 4NN, ☎ 0535 667469.

BTK, 7 Callander Road, Catford, London SE6 2QA ☎ 081 473 1650.

Bus Stop PD. Contact Lisa or Cheryl, 6 Smiths Avenue, Marsh, Huddersfield HD3 4AN, ☎ 0484 516941.

C and C PD. Contact Chris Wildman, 3a The Cedars, Tilehurst, Reading, Berks. RG3 6JW, ☎ 0734 411131.

Chris's PD, 22 Merryfields Avenue, Hockley, Essex SS5 5AL.

Colwyn PD. Free, non-profit-making PD, membership £5 per year. Contact Andy Roberts, 17 Gladys Grove, Colwyn Bay, Clwyd LL29 7YB, ☎ 0492 533442.

Computer & Design Services, 24 Blackmoor Croft, Tile Cross, Birmingham B33 0PE. ☎ 021 779 6368

***CP PD,** (in association with NFA Productions) 3 Dunedin Crescent, Winshill, Burton on Trent, Staffs. DE15 0EJ, ☎ 0283 516736.

Crazy Joe's, 145 Effingham Street, Rotherham, South Yorks, S65 1BL, ☎ 0709 829286.

Crazy Software PD, 50 Woodville Court, Portobello, Wakefield, West Yorkshire WF2 7DU.

Deja Vu, 7 Hollinbrook, Beech Hill, Wigan WN6 7SG, ☎ 0942 495261.

***Diskovery PD,** 108 The Avenue, Clayton, Bradford, West Yorkshire BD14 6SJ, ☎ 0274 880066.

Essex Computer Systems, 118 Middle Crockerford, Basildon, Essex, SS16 4JA, ☎ 0268 553963.

Eurodisk PD, PO Box 2, Radlett, Herts WD7 8QL.

Express PD, 47 Aberdale Road, West Knighton, Leicester LE2 6GD, ☎ 0533 887061.

***Five Star PD,** 48 Nemesia Road, Amington, Camworth B77 4EL. ☎ 0827 68496.

George Thompson Services, Bridgegate Centre, Martinfield, Welwyn Garden City, Herts. AL7 1JG, ☎ 0707 391389.

GVB PD, 43 Badger Close, Maidenhead, Berks. SL6 2TE, ☎ 0831 649386.

Haven Computing, 15b Meeching Road,Newhaven East Sussex BN9 9RL,☎ 0273 513491

Highland PD. Free list contains lots of education and business disks. Contact David Paulin, 255 Drumrossie Avenue, Inverness IU2 3SX ☎ 0463 242431.

Holmes Brothers Compilations. Contact Craig for monthly compilation disk. 23 Rocester Avenue, Wednesfield, Wolverhampton, West Midlands WV11 3AU. ☎ 0902 733418.

Hornesoft PD. Contact Chris Horne, 23 Stanwell Close, Wincobank, Sheffield S9 1PZ, ☎ 0742 422000.

ICPUG (Independent Commodore Product Users Group), PO Box 1309, London, N3 2UT, ☎ 081 346 0050.

Immediate Arts, 26 Lyndhurst Gardens, Glasgow G20 6QY. ☎ 041 946 5798.

Judge Dredd's PD, 1 Nottingham Road, South Croydon, Surrey CR2 6LN.

***Kew=II Collection,** PO Box 672, South Croydon, Surrey CR2 9YS, ☎ 081 657 1617.

***KT's PD.** 75 The Drive, Rochford, Essex SS4 1QQ, ☎ 0702 542536.

Langham PD. Contact Richard Payne, 89 Wolverhampton Road, Codsall, Wolverhampton WV8 1PL

Logic PD, 8/5 Glenalmond Court, Sighthill, Edinburgh EH11 4BE.

Magnetic Fields, PO Box 118, Preston, Lancashire PR2 2AW. ☎ 0772 881190

Mega PD, 78 Bockingham Green, Basildon, Essex SS13 1PF. ☎ 0268 559164 / 0621 828527

NBS, 1 Chain Lane, Newport, Isle Of Wight, PO30 5QA, ☎ 0983 529594.

Network PD & Shareware Library, Kenmare, Co. Kerry, Eire. ☎ 010 353 64 41603

***NJH Computers,** 12 Meesons Mead, Rochford, Essex SS4 1RN. ☎ 0702 546796.

Numero Uno, 21 Burstall Hill, Bridlington, N Humberside YO16 5NP, ☎ 0262 671125.

Orbital Software. Contact A Flowers, 37 The Orchard, Market Deeping, Peterborough, Cambs. PE8 8JR, ☎ 0778 342064.

Pathfinder PD, 41 Marion Street, Bingley, W Yorks. BD16 4NQ, ☎ 0274 565205.

Penguin Public Domain, PO Box 179, Reading, Berks RG3 3DD.

***PD Soft,** 1 Bryant Ave, Southend-on-Sea, Essex SS1 2YD ☎ 0702 466933.

Premier PD, 45 Fairfield Gardens, Eastwood, Leigh-on-Sea, Essex SS9 5SD ☎ 0702 520520.

Riverdene PDL, 30a School Road, Tilehurst, Reading, Berkshire RG3 5AN, ☎ 0734 452416.

Roberta Smith DTP, 190 Falloden Way, Hampstead Garden Suburb, London NW11 6JE, ☎ 081 455 1626.

Scribble PD, 14 Woolner Close, Barham, Suffolk IP6 0DL.

***SeaSoft Computing,** The Business Centre, 1st Floor, 80 Woodlands Avenue, Rustington, W. Sussex BN16 3EY. ☎ 0903 850378.

*** Sector 16,** 160 Hollow Way, Cowley, Oxford, ☎ 0865 774472.

17-Bit Software, 1st Floor Offices, 2/8 Market Street, Wakefield, West Yorkshire WF1 1DH. Phone: ☎ 0924 366982.

Softville, 35 Market Parade, Havant, Hants PO9 1PY ☎ 0705 498199.

Software Expressions, Unit 4, 44 Beauley Road, Southville, Bristol BS3 1PY, ☎ 0272 639593.

Startronics, 4 Arnold Drive, Droylsden, Manchester M35 6RE, ☎ 061 370 9115.

Tazmania PD, 4 Boultham Avenue, Lincoln LN5 7XZ, ☎ 0522 538706 (after 6 pm).

Telescan Computer Services, Handsworth Road, Blackpool FY5 1SB, ☎ 0253 22296.

Trevan Designs Ltd, PO Box 13, Aldershot, Hants. GU12 6YX, ☎ 0483 725905 (note: modem line, not voice).

Vally PD, PO Box 15, Peterlee, Co Durham SR8 1NZ, ☎ 091 587 1195.

Virus Free PD, 31 Farringdon Road, Swindon, Wiltshire SN1 5AR ☎ 0793 512321

Visage Computers PDL. 18 Station Road, Ilkeston, Derbyshire DE7 5LD, ☎ 0602 444501.

Your Choice PD Library, 39 Lambton Road, Chorlton-cum-Hardy, Manchester M21 1ZJ. Phone 061 881 8994.

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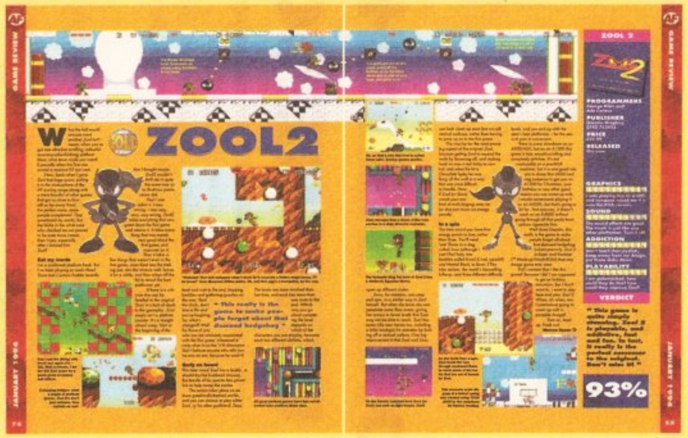






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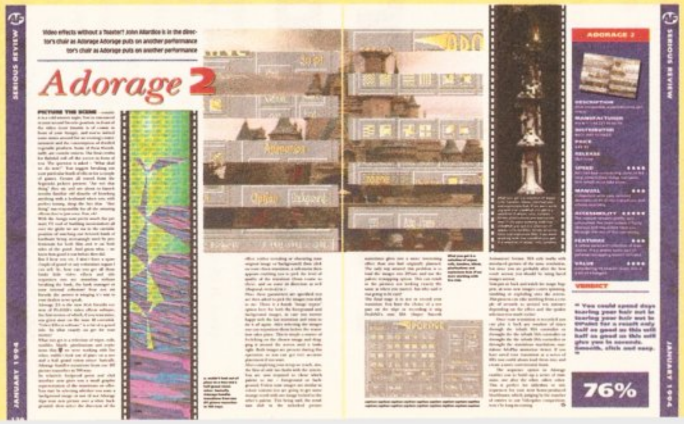






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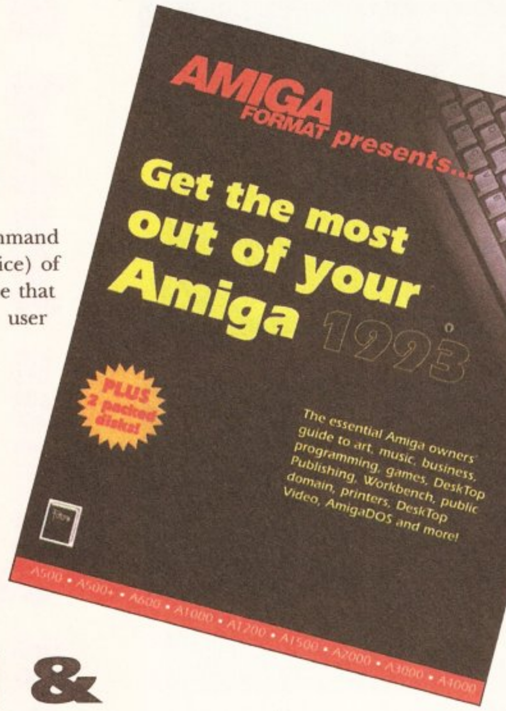




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GET THE MOST OUT OF YOUR AMIGA 1993



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PRODUCT LOCATOR

HARDWARE • HARDWARE • HARDWARE • HARDWARE • HARDWARE • HARDWARE • HARDWARE • HARDWARE

Welcome to the *Amiga Shopper* Buyer's Guide, your regular guide to what's hot in the Amiga market place. It's designed as a simple-to-use yet comprehensive guide which will help you to make the right buying decisions. It may not include each and every product ever produced for the Amiga (that would take up virtually the whole of *Amiga Shopper!*), but you can rest assured that all major brands and models are here. The Buyer's Guide will run each and every month and as new products are released and others discontinued, we'll be updating it accordingly. This month we bring you a guide to hardware for the Amiga owner. Next month: software.

AMIGAS

Model	Price	Memory	Total Chip	Total Fast	Processor	Speed (MHz)	Hard Disk (Mb)	Floppies	Comment
A600	£199	1 Mb	2 Mb	4 Mb	68000	7	No	1x880k	Replacement for now-discontinued A500 Plus
A600HD	£269	1 Mb	2 Mb	4 Mb	68000	7	20	1x880k	A600 with built-in 20Mb IDE
A1200	£299	2 Mb	2 Mb	8 Mb	68020	14.2	No	1x880k	Latest Amiga fitted with AGA
A3000	£1,300	2 Mb	2 Mb	16 Mb	68030	16/25	50/100	1x880k	Available in several hard disk/processor configurations
A4000-030	£999	2 Mb	2 Mb	16 Mb	68030	25	80/120	1x1.76Mb	Successor to the A1500/A2000
A4000-040	£2,000	6 Mb	2 Mb	16 Mb	68040	25	120	1x1.76	Flagship of Amiga range
CD32	£299	2 Mb	2 Mb	–	68020	14.2	No	–	CD-ROM based games console

HARD DRIVES

Model	Supplier	Price	Machine	Capacity (Mb)	RAM Expansion	Rating	Issue
500XP	Surface UK	£489	A500	40	2/8 Mb	****	1,2,8,13
A2091-40	Commodore	£200	A1500→	40	–	**	8,13
A590	Commodore	£399	A500	20	2 Mb	***	1,2,8,13
DataFlyer2000	Trilogic	£350	A1500→	48	–	***	1,2
DataFlyer500	Trilogic	£350	A500	48	–	**	1,2,8,13
FastTrak	Third Coast	£599	A500	40	–	***	8
Impact II+	Silica	£399	A500	50/110	8 Mb	*****	1,2,8,13
Impact IIHC+8	Silica	£299	A1500→	40-300	8 Mb	****	1,2,13
Nexus HC	Power Computing	£350	A1500→	40	8 Mb	****	8,13
Novia 30i	Power Computing	£399	A500	20/30	–	***	8
OpticalDrive	Power Computing	£1,199	SCSI	128	–	N/A	–
Prima	Power Computing	£499	A500	50/100	–	****	8
Protar HD	Protar	£299	A500	20	8 Mb	N/A	–
RocHard	Zye Technology	£379	A500	52	8 Mb	****	13
SysQuest	Omega Projects	£690	SCSI	88	–	****	8
TapeStreamer	Omega Projects	£600	SCSI	150	–	N/A	–
Trumpcard	Third Coast	£399	A500*	40	–	***	8
WordSync2000	Surface UK	£450	A1500→	52	–	****	1,13

Note: Trumpcard can be used on both A500 and A1500

EXTERNAL DRIVES

Model	Supplier	Price	Machine	Size	Capacity	Disable Switch	Rating	Issue
3A-1D	Golden Image	£65	Any	3.5 inch	880K	Yes	****	0,8
A1011	Commodore	£100	Any	3.5 inch	880K	No	***	0,1,2,8
AEHD	Applied Engineering	£140	Any	3.5 inch	1.52 Mb	No	*****	8
CAX354	Cumana	£75	Any	3.5 inch	880K	Yes	****	0,1,2,8
DualDrive	Power Computing	£120	Any	3.5 inch	2x880K	Yes	****	0,1,2,8
Floptical Disk	Digital Micronics	£650	Any	3.5 inch	20 Mb	Yes	*****	8
Internal2000	Power Computing	£50	A1500→	3.5 inch	880K	No	****	8
PC880B	Power Computing	£55	Any	3.5 inch	880K	Yes	*****	8
RF332C	Silica Systems	£60	Any	3.5 inch	880K	Yes	****	0,1,2,8
RF542C	Silica Systems	£80	Any	5.25 inch	880K	Yes	****	0,1,2,8
XL Drive	Power Computing	£99.95	Any	3.5 inch	1.76 Mb	Yes	*****	29
Zydec	Evesham Micros	£55	Any	3.5 inch	880K	Yes	***	8

Note: PC880B comes with built-in disk copier. Enquire about availability of the Floptical Disk.

RAM EXPANSIONS

Model	Supplier	Price	Machine	Size	Max Size	Power Supply?	Fitting	Rating	Issue
500RX	Surface UK	£198	A500	2 Mb	8 Mb	Optional	Expansion Bus	*****	5
A2058	Commodore	£150	A1500→	2 Mb	8 Mb	No	Zorro	****	24
AD501	Ashcom	£21	A500	512K	512K	No	TrapDoor	*****	24
AX601	Ashcom	£45	A600	1 Mb	1 Mb	No	TrapDoor	****	24
AdRAM2000	Power Computing	£179	A1500→	2 Mb	8 Mb	No	Card	****	8
Addax	Ashcom	£125	A500	2 Mb	8 Mb	No	Expan Bus	****	24
AmiTek600	Silica Systems	£45	A600	1 Mb	1 Mb	No	TrapDoor	****	24
Aries2000	Power Computing	£129	A1500→	2 Mb	8 Mb	No	Zorro	*****	24
Ashcom1.8Mb	Ashcom	£155	A500	1.8 Mb	–	No	TrapDoor	N/A	–
Ashcom512k	Ashcom	£35	A500	512k	–	No	TrapDoor	****	8
GVP Series2	Silica	£159	A1500→	2 Mb	8 Mb	No	Card	N/A	–
PC501	Power Computing	£30	A500	512K	512K	No	TrapDoor	****	24
PC501+	Power Computing	£36	A500 Plus	1 Mb	1 Mb	No	TrapDoor	*****	24
PC601	Power Computing	£40	A600	1 Mb	1 Mb	No	TrapDoor	*****	24
Power 8 Mb	Power Computing	£109	A500	2 Mb	8 Mb	No	Expan Bus	*****	24
ProAgnus	WTS Electronics	£139	A500/2000	1 Mb	Chip Ram Exp	No	Internal	****	24
ProRAM Plus	Datel	£25	A500	512k	–	No	TrapDoor	***	8
ProRAM501	WTS Electronics	£19	A500	512K	512K	No	TrapDoor	****	24
ProRAM601	WTS Electronics	£38	A600	1 Mb	1 Mb	No	TrapDoor	*****	24
RAM-Master 2	Datel	£100	A500	1.5 Mb	–	No	TrapDoor	N/A	–
V2000	Virgo	£104	A500	2 Mb	–	No	TrapDoor	N/A	–
Zydec1.5	Zydec	£79	A500	1.5 Mb	–	No	TrapDoor	N/A	–
HD8+	Silica Systems	£150	A150→	0 Mb	8 Mb	No	Zorro	*****	24

PROCESSOR ACCELERATORS

Model	Supplier	Price	Machine	Processor	Speed	Max 32-bit RAM	Maths Co-pro	Rating	Issue
040/500	Power Computing	£725	A500	68040	28 MHz	8 Mb	68882	*****	14
2000/40	Marcam	£1,937	A1500→	68040	50 MHz	32 Mb	Yes	N/A	–
38 Special	Omega Projects	£850	Any	68030	38 MHz	8 Mb	68881	****	13

PRODUCT LOCATOR

40/4 Magnum	Omega Projects	£N/A	A1500→	68040	28 MHz	16 Mb	68882	*****	13
A1230	Silica	£299	A1200	68030	40 MHz	32 Mb	68882	*****	27
A2630	Commodore	£1,200	A1500→	68030	25 MHz	4 Mb	Yes	N/A	–
A3001	Silica	£1,799	A1500→	68030	50 MHz	32 Mb	Yes	*****	3,5
A5000-16	ACL	£189.99	A500, A500 Plus	68020	16 MHz	4 Mb	68881	N/A	4
A530	GVP/Silica	£800	A500	68030	40MHz	8 Mb	68882	*****	20
AdSpeed	Silica	£173	A500	68000-16	16 MHz	–	No	****	3,5
B5000-25	ACL	£479	A500	68030	25 MHz	8 Mb	68882	****	3,5
CBM 040 Card	Commodore	£NA	A3000	68040	40MHz	NA	Yes	*****	20
CSA MegaMidget	Omega Projects	£389	A500	68030	33 MHz	8 Mb	Yes	****	3,5
CSA Rocket Launcher	Omega Projects	£549	A1500	68030	50MHz	–	68882	*****	20
FusionForty	Power Computing	£1,999	A1500→	68040	50 MHz	32 Mb	Yes	N/A	–
G-Force	Silica	£1,999	A3000	68040	28 MHz	–	–	N/A	–
G-Force	Silica	£599	A1500	68030	25 MHz	16 Mb	68881	****	15
G-Force 030	Silica	£699	A1500	68030	40 MHz	4 Mb	68882	****	27
M1230XA	Indi Direct	£299	A1200	68030	50MHz	128 Mb	68882	****	29
Mercury	Power Computing	£1,249	A3000	68040	28 MHz	32 Mb	68882	*****	14
VXL-30	ZCL Ltd	£409	A500	68030	25 MHz	8 Mb	Yes	N/A	–
Zeus	Power Computing	£1,449	A1500→	68040	28 MHz	64 Mb	68882	*****	14

Note: Although some 68030 cards appear to run faster than their '040 equivalents, this may not necessarily be the case. All '040 cards will run faster internally.

SCANNERS

Model	Supplier	Price	Machine	Type	Colour	Resolution	Rating	Issue
AlfaScan	Golden Image	£199	Any	Hand Held	No	400dpi	*****	14, 22
DaataScan 2GS	Pandaal	£125	Any	Hand Held	No	400dpi	***	14, 22
GT-6000	Epson UK	£1300	Any	Flatbed	Yes	600dpi	*****	17
GeniScan	Datel	£130	Any	Hand Held	No	400dpi	N/A	–
GoldenImage	GoldenImage	£150	Any	Hand Held	No	400dpi	*****	5
Handy Scanner	Pandaal	£140	Any	Hand Held	No	400dpi	***	14
Pandaal Scanner	Pandaal	£180	Any	Hand Held	No	400dpi	****	3
Power Scanner 2	Power Computing	£99	Any	Hand Held	No	400dpi	*****	14
Powerscan Colour	Power Computing	£239	Any	Hand Held	Yes	400dpi	***	23
Sharp JX-100	Silica	£695	Any	Hand Held	Yes	200dpi	N/A	–
Sharp JX-300	Silica	£3600	Any	FlatBed	Yes	300dpi	N/A	–

DIGITISERS

Model	Supplier	Price	Realtime	Colour	Realtime Colour	Animation	Rating	Issue
ColourPic Plus	JCL	£699	Yes	Yes	Yes	Yes	****	22
DigiView 4	Silica	£150	No	Yes	No	No	N/A	–
FrameGrabber	Marcam	£599	Yes	Yes	Yes	Yes	N/A	–
FrameMachine	Micro-PACE UK	£379.95	Yes	Yes	Yes	Yes	***	31
V-Lab	ACS	£300	Yes	Yes	Yes	No	****	17
V-Lab YC	ACS	£381	Yes	Yes	Yes	No	****	32
VideoDigitiser	Datel	£80	Yes	Yes	No	No	N/A	–
VideoMaster	MicroDeal	£69.95	Yes	Yes	No	Yes	****	25
Videon	Power Computing	£200	No	Yes	No	No	N/A	–
Vidi-Amiga 12 AGA	Rombo	£99.95	Yes	Yes	No	Yes	*****	22

SOUND SAMPLERS

Model	Supplier	Price	Stereo	Volume Adjust	Resolution	Rating	Issue
AD1012	HB Marketing	£399	Yes	Yes	12-bit	N/A	–
AD1016	HB Marketing	£TBA	Yes	Yes	16-bit	N/A	–
AMAS 2	MicroDeal	£100	Yes	Yes	8-bit	N/A	–
Audio Engineer	HB Marketing	£199	Yes	Yes	8-bit	*****	5
Audition 4	HB Marketing	£49	Yes	Yes	8-bit	****	10
Clarity 16	MicroDeal	£149.95	Yes	Yes	16-bit	****	25
GVP DSS	Silica	£60	Yes	Yes	8-bit	****	3
Megamix Master	Rombo	£39.95	Yes	Yes	8-bit	N/A	–
MicroSampler	Datel	£25	Yes	No	8-bit	N/A	–
Perfect Sound 3	HB Marketing	£60	Yes	Yes	8-bit	***	10
SampleStudio 2	Datel	£70	Yes	No	8-bit	N/A	–
Sound Master	HB Marketing	£130	Yes	Yes	8-bit	N/A	–
SoundTrap 3	Omega Projects	£30	No	No	8-bit	****	3
StereoMaster	MicroDeal	£40	Yes	Yes	8-bit	****	11
StereoSampler2	Trilogic	£40	Yes	Yes	8-bit	N/A	–
TechnoSound Turbo	New Dimensions	£49.95	Yes	Yes	8-bit	****	30

Note: AD1012 and AD1016 are for A1500→ only

GENLOCKS

Model	Supplier	Price	Fade	Dissolve	S-VHS	RGB Pass thru	Rating	Issue
8802 FMC	Marcam	£178	Yes	Yes	No	Yes	****	31
A8802	Marcam	£139	No	No	No	Yes	N/A	–
A8802S-VHS	Marcam	£499	Yes	Yes	Yes	Yes	***	10
A8806	Marcam	£499	No	No	No	Yes	N/A	–
GST Gold	Third Coast	£550	Yes	Yes	Yes	Yes	N/A	–
GeneSys	G-2 Systems	£934	Yes	Yes	Yes	Yes	****	29
Hama 290	Hama PVAC	£749	Yes	Yes	Yes	Yes	****	16
ImageMaster	Neriki	£1,150	Yes	Yes	Yes	Yes	N/A	–
MicroGen	Power Computing	£199	Yes	Yes	No	Yes	N/A	–
MiniGen	Lola	£49.95	No	No	No	No	*****	31
MiniGen Pro	Lola	£149.95	Yes	Yes	No	Yes	****	32
ProGen	Gordon Harwood	£130	No	No	No	Yes	N/A	–
RocGen	Silica	£117	Yes	Yes	No	No	****	8
RocGen+	Silica	£199	Yes	Yes	No	Yes	****	10
VideoCentre2	G2	£1,170	Yes	Yes	Yes	Yes	N/A	–
VideoCentre3	G2	£1,999	Yes	Yes	Yes	Yes	****	7

PRODUCT LOCATOR

VideoMaster VM-2	Power Computing	£799	Yes	Yes	Yes	Yes	***	1
Videocomp G-100	Silica	£1,800	Yes	Yes	Yes	Yes	*****	3

COLOUR CARDS

Model	Supplier	Machine	Price	Type	Colour Palette	Max Resolution	Rating	Issue
AVideo 12	Checkmate	A1500→	£299	12-bit	12-bit	768x580	***	13
AVideo 24	Checkmate	A1500→	£599	24-bit	24-bit	768x580	****	15
DCTV	Silica	A500	£499	Pseudo	24-bit	368x580	****	12
GVP IV-24	Silica	A1500→	£1,799	24-bit	24-bit	910x576	****	12
Harlequin	ACS	A1500→	£1,400	24-bit	24-bit	910x576	*****	11
OpalVision	Micro-PACE	A1500→	£899	24-bit	24-bit	768x580	*****	20
Rembrandt	Power Computing	A1500→	£1,499	24-bit	24-bit	1024x1024	****	13
Retina	ACS	A1500→	£345	24-bit	24-bit	2400x1200	****	27

Note: A500 devices can be used on all Amigas

TOUCH TABLETS

Model	Supplier	Price	Size	Resolution	Rating	Issue
Cherry Mk4	Cherry	£450	9x12"	*****	N/A	–
Genitizer	Datel	£130	9x6"	****	N/A	–
Podstat PT-3030	HB Marketing	£179	9x12"	*****	N/A	–

DOT MATRIX PRINTERS

Model	Supplier	Price	Pins	Speed(CPS)	Fonts	Buffer	Rating	Issue
200	Citizen	£250	24	240	7	8K	N/A	–
240C	Citizen	£350	24 (colour)	240	9	8K	N/A	–
L24d	Citizen	£292	24	109	3	8K	****	4
LC200	Star	£304	24	91	4	16K	****	4
LC24	Star	£304	24	130	5	16K	****	4
LQ400	Epson	£269	24	121	3	8K	****	4
LQ550	Epson	£375	9	109	4	8K	***	4
LX850	Epson	£269	9/24	106	3	4K	***	4
ML380	Oki	£386	24	127	3	8K	****	4
P20	NEC	£351	24	115	8	8K	****	4
Swift 24	Citizen	£428	24	121	5	8K	****	4
Swift 9	Citizen	£280	9	121	3	8K	*****	4
Swift 90C	Citizen	£169	9	216	6	8K	****	29

INKJET PRINTERS

Model	Supplier	Price	Nozzles	Speed CPS	Fonts	Resolution	Rating	Issue
B100	Fujitsu	£349	48	160	3	300dpi	****	22
B200	Fujitsu	£499	48	180	3	300dpi	***	22
BJ-10ex	Canon	£299	64	83	4	360dpi	*****	22
BJ-10sx	Canon	£227	64	110	3	360dpi	****	29
BJ300	Canon	£495	64	300	3	360dpi	****	22
Diconix 701	Kodak	£399	48	200	3	300dpi	***	22
Projet	Citizen	£496	48	360	3	360dpi	****	22
SQ870	Epson	£659	48	360	8	360dpi	****	22
Stylus 800	Epson	£295	48	360	8	360dpi	***	29

LASER PRINTERS

Model	Supplier	Price	Memory	Speed (pgs per min)	Fonts	Resolution	Rating	Issue
EPL4000	Epson	£799	512K–5.5Mb	6	2	300dpi	****	22
LBP-4 Plus	Canon	£1,175	512K–2.5Mb	5	5	300dpi	****	22
Laser 4	Star	£1,173	1Mb–5Mb	4	4	300dpi	****	22
OL400	Oki	£549	512K–2Mb	4	4	300dpi	*****	22
Ricoh LP1200	Silica	£820	2Mb–4Mb	6	6	400dpi	*****	22

MISCELLANEOUS HARDWARE

Model	Supplier	Price	Type	Rating	Issue
Emplant	BlitterSoft	£254.95	Macintosh Emulator	****	28
GlareGuard	GND Distribution`	£86.25	Screen filter	****	26
Golden Gate	Silica Systems	£N/A	25MHz 80386 PC Emulator for Amiga 1500+	N/A	–
I/O Port	SwitchSoft	£28	Electronics Projects kit	****	17
ICD KickBack	Silica Systems	£27	Keyboard switchable ROM sharer	N/A	–
Kickswitch	Omega Projects	£25	Keyboard switchable ROM sharer	N/A	–
Opto Mouse	Gasteiner	£14.95	High resolution mouse	****	28
Realt-time clock	First Choice	£17.99	A1200 real-time clock	****	29
RocKey	Silica Systems	£350	Chromakey for RocGen Plus genlock	****	19
Sound Enhancer	Omega Projects	£40	Improved Amiga sound capabilities	N/A	–
Toshiba CD-ROM	Almathera	£499	CD-ROM drive	****	27

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ASAP	0724280222
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Citizen	0895 72621
Commodore	0628 770088
Cortex	051 236 0480
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G2 Video Systems	0252 737151
Gasteiner	081 365 1151
GND Distribution	081 885 5512
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JCL Business Systems	0892 518181
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MicroDeal	0726 68020
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New Dimensions	0291 690933
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Power Computing	0234 273000
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Rombo	0506 414631
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SMG	0274 562999
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Surface UK	081 566 6677
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BUYING ADVICE FOR SHOPPERS

Whether you're buying over the phone or at a local store, here's our advice on getting what you want.

BUYING IN PERSON

• Where possible, always test any software and hardware in the shop before taking it home, to make sure that everything works properly.
• Make sure you have all the necessary leads, manuals or other accessories you should have.
• Don't forget to keep your receipt.

BUYING BY PHONE

• Be as clear as possible when stating what you want to buy and make sure you confirm all the technical details. Things to bear in mind are version numbers, memory requirements, other hardware or software required, and compatibility with your Amiga (be sure you know which version of Kickstart you have).
• Check the price you are asked to pay, and make sure that it's the same as the price advertised.
• Check that what you are ordering is actually in stock.
• Check when and how the article will be delivered, and that any extra charges are as stated on the advert.
• Make a note of the date and time when you order the product.

BUYING BY POST

Again, you should clearly state exactly what it is you are buying, at what price (refer to the magazine, page and issue number where it's advertised) and give any relevant information about your system set-up. Also make sure you keep copies of all correspondence.

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However you bought it, you are entitled to return a product if it fails to meet one of the following criteria:
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GETTING REPAIRS

Always check the conditions of the guarantee, and servicing and replacement policy, so that you know what level of support to expect. Always fill in and return warranty cards as soon as possible, and make sure that you are aware of all the conditions in the guarantee.

BUYING PD

Even though PD software is relatively inexpensive, you should still apply the guidelines set out above, making sure that you confirm all orders as clearly as possible.

Shopping around is still important when buying PD because different sources charge different prices for the same disks. There is no set pricing structure for disks, but bear in mind that PD houses are, in theory, supposed to be non-profit-making operations. AS

BUYING BY MAIL

• Before you send any money, ring the supplier to confirm that the item you want is in stock and when the delivery is likely to be made. Enquire about returning unwanted goods and the supplier's refund policy. Find out about hidden extras like postage and packing charges, and whether the prices quoted include VAT.

• Beware of companies that do not include an address in their adverts.

• If ordering goods of more than £100 in total value, always try to use a credit card – if anything goes wrong, you will be legally entitled to claim against the credit card company, even if the retailer has gone bust. You may also get extra insurance – check with the credit card company.

• Always buy from the most recent issue of *Amiga Shopper*.

• When your order arrives, check everything carefully. If anything is missing, don't use the product at all – contact the supplier immediately. If something doesn't work, make the obvious checks such as the fuse, but don't try to fix the product.

• If a problem does arise, contact the supplier in the first instance and calmly and politely explain your problem. In most cases these things are merely a mix-up or a misunderstanding that the supplier will happily put right. If you think you have a genuine grievance that has not been resolved, you might consider contacting your local Trading Standards Officer (the number will be in the phone directory – check the local council listing).

• Always keep records of correspondence with any mail order company you deal with and also make a note of where and when you saw the product advertised. False or misleading advertising is an offence, and suppliers must stick to what they've said in adverts.

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AMIGA SHOPPER

Issue 34 – February 1994

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Art Editor: Mark Nottley
Production Editors: Ian Pemble, Dave Green
Cover disk Editor: Cliff Ramshaw
Art Assistant: Mark Nottley
Staff Writer: Cliff Ramshaw
Designer: Mark Nottley
Consultant Editors: Jeff Walker, Mark Smiddy, Ian Wrigley
Contributors: Jason Holborn, Gary Whiteley, Dave Winder, Toby Simpson, Wilf Rees, Alex Gian, Paul Overaa
Photography: Stuart Baynes, Rob Scott
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Admin Assistant: Suzannah Angelo-Sparling
Publisher: Stuart Anderton
Group Publishing Director: Greg Ingham

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Editorial: 30 Monmouth Street, Bath, Avon BA1 2BW
☎ 0225 442244 Fax: 0225 446019
E-mail: amshopper@cix.compulink.co.uk

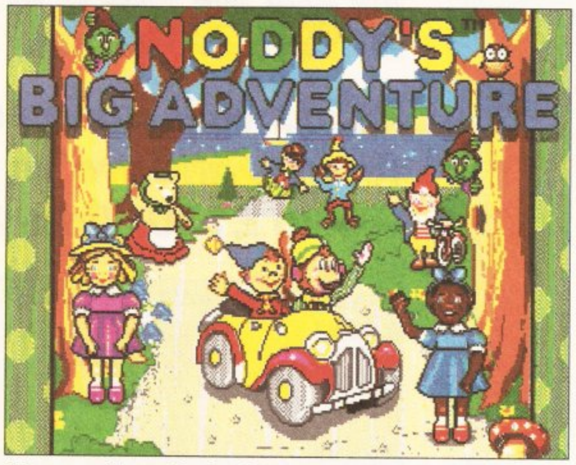
Advertising: Rayner House, 23 Higher Hillgate, Stockport SK1 3ER. ☎ 061 474 7333 Fax: 061 476 3002

Subscriptions: Future Publishing, Somerton, Somerset TA11 6TB. ☎ 0458 274011

IN NEXT MONTH'S ISSUE

We're getting back to basics next month. Our special beginners' feature will cater for all of you who are just starting out on that great big Amiga adventure. It's exciting, certainly, but it can also be confusing. So *Amiga Shopper*'s going to make sure you get all the information you'll need to begin your "journey of discovery", as someone with a propensity for sentimental clichés might put it.

As you might expect (although perhaps not, if you're new to the Amiga and the stupendous organ of enlightenment that some call *Amiga Shopper*) we'll be presenting the facts you need in the clear, no-nonsense format that has made us such a success with the editor's mother (and a few readers, too).



Join us on the path of enlightenment, the quest for knowledge, the road to victory with our guide for beginners. (We're reviewing Noddy's Big Adventure, too.)

And hey, don't be dismissive if you feel you've already passed that first hurdle and are hurtling towards Amiga proficiency with an ever-increasing velocity. It's very unlikely that you know everything we've got to say – stick around and pick up a few nuggets from our information gold mine.

Naturally, next month's issue will be carrying a whole load of articles lovingly tailored to meet the requirements of the more experienced Amiga user. We'll be continuing our series on C programming, with more enhancements to the address book application, and we'll be adding yet more power to the paint package in the AMOS Action pages.

We'll be taking our regular look at the world of low-cost and no-cost software, and carrying news of the latest Amiga-related happenings. The cover disk will, as usual, be packed with some absolutely smashingly wonderful, lovely and downright useful programs, and the Amiga Answers pages will be bursting with solutions to your problems. Oh, and we'll be giving you a full, in-depth review of *Noddy's Big Adventure*, too.

Amiga Shopper issue 35 will be going on sale Tuesday 1 February. It will be big and lovely and informative, intolerably wonderful in a deliciously no-nonsense, serious sort of fashion, without any of those game things but with lashings and lashings of expertise and help and advice and, oh, all manner of good things. Buy it. AS

WIN A YEAR'S FREE SUBSCRIPTION

What was the name of the predecessor to the Macintosh, also created by Apple? Send your answers to "Back Before The Mac", *Amiga Shopper*, 29 Monmouth Street, Bath BA1 2DL. The closing date is Tuesday 4 January. The first correct answer wins a year's free subscription. There were no correct entries for last month's compo, so try a bit harder this time, okay?

YOU'VE WON!

At last, at long last, it's time to announce the winner for December's *What A Scan* competition. The prize, as you will no doubt remember, was an Epson GT 6500 P 24-bit flatbed colour scanner – a beauty and no mistake, generously donated by the good folk at Epson themselves.

We're pleased to announce that the individual who will be receiving this bounty is Nathan White of Walsall. Well done!

MAG*SAVE

***AMIGA SHOPPER* SELLS LIKE A POPULAR YET CHEAP COMMODITY – MAKE SURE YOU RESERVE A COPY AT YOUR LOCAL NEWSAGENT NOW!**

DEAR NEWSAGENT, Please reserve/deliver me a copy of *Amiga Shopper* every month, beginning with the March issue, which goes on sale on Tuesday 1 February.

Name ______________________

Address ______________________

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• NOTE TO NEWSAGENT: *Amiga Shopper* is published by Future Publishing (0225 442244) and is available from your local wholesaler.

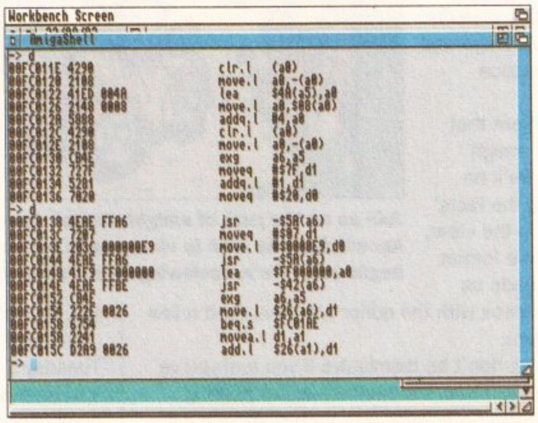
• PS Oh, and if you do have any problems getting hold of your favourite Amiga mag, call Kate Elston on 0225 442244 and she'll help you out.

Are there any products or subjects you'd like us to take a look at? Well, just drop a line to: *Amiga Shopper*, 30 Monmouth Street, Bath, Avon BA1 2BW.

WIN • WIN • WIN • WIN • WIN • WIN

Get yourself a resourceful ally

ReSource is an interactive disassembler for the Amiga, and we've got four copies to give away, each worth £130. Time to get your thinking cap on...



Machine code listings can be quite impenetrable, as you can see here. What you need is a disassembler...

You'll find this month's competition prize invaluable if you're a keen programmer. It's a disassembler called *ReSource*, and it enables you to take raw machine code instructions and turn them back into assembly language.

Being able to do this is especially useful if you've written a program and it doesn't work properly. You can load the machine-coded result into *ReSource* and, once you've converted it into assembly language, complete with labels and all library function calls named, you'll find the program's faults are much easier to trace. You can also, of course, use *ReSource* to look at programs written by other people, thereby learning valuable program techniques and picking up useful hints and tips.

Among the features to which *ReSource* can lay claim are: nearly all Amiga version 2 library offsets and symbol bases are included, with over 7,000 symbols supported; user-defined macros; support for binary, decimal, hexadecimal and ASCII; automatic or manual creation of labels; files can be re-assembled after disassembly and modification by *ReSource*; and on-line help with word indexing by means of hypertext.

You may have seen the review of *ReSource* in last month's *Amiga Shopper*. If you did, you'll probably remember that Toby Simpson gave it an overall rating of nine out ten, describing it as: "the best disassembler I have ever seen." He thought the packages features were "brilliantly flexible and powerful".

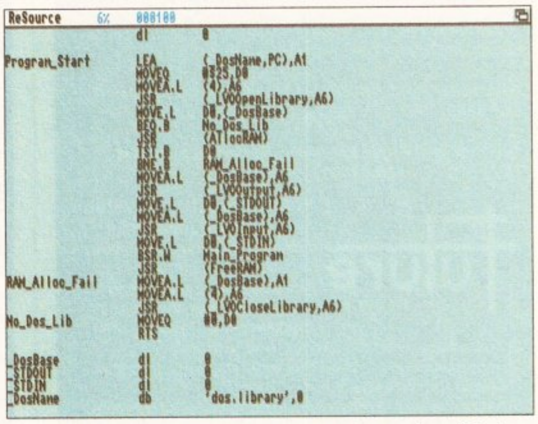
To get a taste for yourself of what this program is capable of, why not check out the demo version that's on this month's cover disk?

Thanks to the generosity of the people at Helios Software, UK distributors for *ReSource*, we've got four copies of this marvellous package to give away.

All you have to do to be in with a chance of winning is answer the questions in the box below. Send your guesses (or cast-iron certainties, if you're feeling cocky) written on a postcard (or the back of a sealed envelope), along with your name and address, to this address:

ReSources For Courses
Amiga Shopper
29 Monmouth Street
Bath BA1 2DL

The closing date for entries is Friday 4 February. The first four correct entries drawn from the editor's cardboard box *(Who knows, perhaps someone will get me a hat for Christmas – Ed)* will win. Send only one entry per household and please state if you don't want your name included on a mailing list. The competition isn't open to employees of Future Publishing, The Puzzle Factory or Helios Software. AS



...like ReSource, shown here, to replace a bewildering array of numbers with labels and symbol names.

THE QUESTIONS

1. Who played the hunchback in *Manon Des Sources*'s prequel?
(a) Gerard Depardieu
(b) Yves Montand
(c) General de Gaulle

2. Who reviewed ReSource for AS?
(a) Paul Overaa
(b) Gus Chandler
(c) Toby Simpson

3. Which language does not produce machine code programs?
(a) Pascal
(b) Modula 2
(c) ARexx

WIN • WIN • WIN • WIN • WIN • WIN

At Last!

A double-decker that won't keep *you* waiting.

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"It is the most important and singularly useful product I have seen since Amiga Shopper began." Amiga Shopper - January 1994

Comparison by Feature

Features	Competitor	KCS HD²
Kickstart	2.04+	1.2 or better
Double-density	880K formatted	better than 2Mb
High Density	1.76Mb formatted	better than 4Mb
Filing Systems		
FFS	Workbench 2.04+	Yes - all Amigas
International	Workbench 2.1+	Yes - all Amigas
PC 720K	Workbench 2.1+	Yes - all Amigas
PC 1.44M	Workbench 2.1+	Yes - all Amigas
DCFS	Workbench 3.0	Yes - all Amigas
Software		
HD backup	At extra cost	Yes. Software inc
Track Display	No	Yes
FastCopy	No	Yes
Copier Hardware		
Synchro Express	At extra cost	Internal emulation
Blitz	At extra cost	Internal emulation
Cyclone	At extra cost	Internal emulation
Clone T2	At extra cost	Internal emulation

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While stocks last - at a giveaway price!

The famous KCS Power PC Emulator is still available for the A500 (Kickstart 1.3) and big box models with adaptor. This remarkable hardware turns your machine into an 11MHz IBM PC clone with colour VGA and 1.44Mb disk possibility. To qualify for this limited offer call Bitcon now!

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